Pigeon House Plans and Fixtures

A COMPLETE COMPENDIUM
of Various Kinds of Pigeon Houses and
Devices Used by Successful
Pigeon Keepers

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INTRODUCTORY

AS OUR sales of the Cushman Squab House Plans have been increasing and as such plans are not intended, nor suitable, for the breeding of fancy or racing pigeons, it became apparent that a book was wanted that would give the beginner, as well as the older fanciers, some ideas and details of the requirements of a complete and successful loft. Hence this book.

The importance of proper pigeon housing cannot be overestimated. It is the foundation of success. Although pigeons can be raised in crude quarters, the high-grade prize-winners require housing that will insure their most favorable growth; the racing man requires special fixtures and facilities to win races and the squab man must have good, well built houses, if he is to reap the largest profits during the winter months.

Our treatment of this subject will follow historical lines and it is believed that because some of the oldest ideas are still successful, it is an indication of the antiquity of pigeon breeding.

Every effort has been made to give due credit for each and every suggestion that is not original with us and, it will be noticed, that some of the plans which have been advertised as original are but slight modifications of what had been used years before. But special credit is due Mr. K. Wernle, who made most of the drawings from which these plates of plans have been reproduced, and in making them he has introduced many practical suggestions and given details which will prove of value to anyone who undertakes to make a house or coop after such plan.

As this work is a pioneer in this field, being the first attempted in America, there may be some omissions and errors. However, every effort has been made to cover the various kinds of houses and fixtures so there may be an idea for each and every kind of pigeon breeder and it is hoped this work will be a real help in the advancement of pigeon keeping in this country.

The only other work of this character which has been brought to our attention appeared in Germany and, while it contains many good ideas that are useful, their methods of construction are somewhat different from ours and our country is so diversified that our pigeon keepers have of necessity had to solve some problems for themselves. Hence American fanciers have made some advances in this undertaking which it will be our aim to outline and record. Undoubtedly the American pigeon keepers are as far advanced in the subject of pigeon housing as those of any country and in seeking for the best to meet the differences in climate from north to south and from season to season, they have really done some pioneer work and found some new ideas, as we shall see.

Before going into details, we are going to present to you an extract from the book, "The Dovecote and Aviary," by the Reverend E. S. Dixon, M. A., which was published in England in 1851 and is now out of print. This extract not only outlines the several kinds of houses used in England at that time, but also gives a beautiful and interesting view of some of the pleasures of the pigeon fancy. It follows:

"What boy, whose parents permitted him to keep ever so few pairs of pigeons, forgets in after days the pleasing anxieties of which they were the source—the occupation for spare half hours which they never failed to afford? Well do we remember our first two pigeon houses, of widely diverse construction; the earliest effort of contrivance being an old tea chest fixed against the wall, with the complicated machinery of a falling platform, or "trap," in front, to be drawn up by a halfpenny-worth of string, so as to secure the inmates, or their visitors, for a learned inspection; the second, a more ambitious piece of architecture, namely, a tub mounted on the top of a short scaffold pole, divided internally into apartments, each of some cubic inches capacity, and each with a little landing place projecting for the birds to alight upon after their meal on the ground or their circling exercise above the house tops. And the wonderment to behold the process of fixing this lofty structure firm and upright in its site in the back yard! How the man dug an awful hole in the ground from which he could with difficulty shovel out the earth for the crowding, and the pushing, and the peeping in of us children and the maids—how the tall structure was, by the combined efforts of all present, slowly set upright—how three or four vast flint stones (rocks they seemed to us to be) were jammed in at the foot with a beetle borrowed from the pavior that lived up a yard in our street—how, when earth and pebbles had been duly added to make all smooth and tight, we retired a few yards and looked up with admiration—and when at last the short ladder was brought wherewith to ascend, which we did without delay, and inspect the lockers, Smeaton, gazing from the top of the Eddystone Lighthouse, or Stephenson darting on a locomotive engine through the Menai Tube, might enjoy a pride higher in degree, but not stronger in intenseness!"

In another place he says: "Now, there are three modes in which a home is usually supplied to pigeons in this country (England). First, by the old-fashioned Dovecotes, built of solid materials, and capable of accommodating a large number of birds, such as we see forming part of the outbuildings of manorial houses, which have enjoyed the privilege of keeping them for many years. Secondly, in small open boxes, either placed against wall and gables, or elevated and isolated on poles; the birds, as before, constantly having free access, and being totally unconfined, though usually forming a smaller population than in the former case. And thirdly, in a room, or chamber, or pigeon loft appropriated to the purpose, which can be closed or opened at the pleasure of the owner, containing also separate cages for special purposes, and in short all the apparatus requisite for the systematic practice of breeding, and of regulating the pairing and rearing of the inmates, according to determinate rules. This last mode, which may be made equally profitable as regards the increase of stock, is the only one which can prove satisfactory to the fancier, or to the experimental naturalist. The first system is slovenly and semi-barbarious, belonging rather to feudal times, and a primitive state of agriculture, rather than to the present day. The second plan may do to furnish an ornamental addition to the outbuildings of a residence, or to accommodate a few children's

pets, but is otherwise unsatisfactory; and, therefore, it is that of this third mode of pigeon keping we shall first give account."

Following the Rev. Dixon's suggestion in the preceding paragraph, your present author plans to concentrate upon the latter kind of houses or lofts, namely, those for men who desire to KEEP or manage their pigeons in all of their breeding and rearing operations. For such purpose there are certain requirements which we will attempt to introduce and explain.

But first we must say that in this undertaking we recognize that there are several kinds of pigeon keeping; there is the racing pigeon man, the squab producing man, the high-flying or performing pigeon man, and the large army of ultra-fanciers who, with his numerous kinds of specimens, requires an equally numerous variety of contrivances. A little thought upon this subject will reveal the fact that some of the varieties overlap each other in their requirements, hence we must bunch some of these things and the reader is asked to give attention to plans and devices for some varieties, or breeds, in which they might not be really interested; because it is assumed that the best teacher is the "mistakes of the other fellow." Your author's experience is that some of the best suggestions in answer to pigeon keeping problems have come from men keeping a variety entirely different to the one over which a fancier was having difficulty. Hence, he asks his readers to study carefully all things pertaining to pigeon keeping in every line if you would reach the highest degree of skill and perfection in this undertaking.

General Suggestions.

In planning a pigeon house it must be remembered that there are some particular differences between pigeons and our barn-yard poultry. The pigeon differs from poultry in that it is strictly a flying bird and likes to mount to higher objects so it can overlook the surrounding buildings. For this reason, if pigeons are to have any liberty, the pigeon house should be elevated as much as possible.

While poultry will, under some conditions, remain out in the wet and even are not much handicapped if they get thoroughly drenched, they will not naturally go into water like a pigeon. Pigeons like to bathe and, if given a chance, will splash water on themselves every day; hence, in the planning of a house you will have to provide some system of bathing. This desire for the bath indicates a difference in the feather formation. If anything the pigeon's feather will shed the water better than that of a fowl and it also would appear that they can stand more variations of temperature better than a fowl.

If the pigeon keeper observes the body feathers of a pigeon in the fall, it will be noticed that close to the body there is a fine fluff and when the pigeon sits in a corner in a huddle-up manner, these fine fluffy feathers must serve as a warm protective covering.

Thus we see that the pigeon, if given a fair chance in a house that will protect it from the wind and inclement weather, should thrive and produce young in season satisfactory to the keeper.

The House.

The essentials of a house are dryness, ventilation, sanitation and proper space for some movement of the birds. Drainage is not mentioned as a general character because if there is dryness drainage is unnecessary.

The first essential then is a proper roof, for if you have a good roof you will be able to overcome many troubles. The roof should not only be so constructed of material to shed water, but should also be double boarded to protect the interior from great heat in summer time. It has been our observation that hot days are very serious causes for producing serious diseases among pigeons; hence, a house that will protect the birds from excessive heat is desirable. Perhaps the best way to accomplish this is to board up under the rafters. This double boarding need not be of thick material, even thin wall board will do.

The next most important consideration is to build the house so it is rat and mice proof. The easiest way to accomplish this is to have the house a foot or two above the surrounding ground so that a cat or dog can get under occasionally and the rats will not be likely to gain an entrance. Such floors, however, should be also double boarded with paper between, and the upper boards should be of sufficient thickness so that they are not likely to warp when they become damp from the bathing water of the pigeons. The floor should be made of surfaced lumber as such is more easily scraped clean and thus is more sanitary.

Next we have the side walls and these will depend upon the climate in which the house is to be situated. In warmer climates (where it does not freeze) the side walls need not be very substantial; but in northern places where the temperature gets below zero, wind proof walls on at least three sides and partially on the other are desirable. The opening should be on the south or east in most sections as we usually get the most severe storms from the west, north and northeast. A wind from the south is seldom cold or as penetrating even in winter time.

Another general observation about a pigeon house is that while it should be high enough to permit the owner to move about without too much stooping, it should also never be so high as to permit the free passage of the birds overhead out of the keepers' reach; as in all pigeon management it is occasionally necessary to catch a bird to make an examination and when pigeon houses are too high, this catching becomes very difficult and causes much disturbance among the birds.

A careful reading of the foregoing about houses will show that to carry out these considerations is the reason the loft or house takes the many styles and shapes as we find them.

There is another thought that all pigeon men should keep in mind in planning their pigeon houses and that is, there is always more pleasure in such undertakings if you have the proper arrangements. This is the thought that has stimulated us in this undertaking for we have, in our various visits to various lofts, seen many things which have made the loft unhandy and which the owner admitted that if they had it to do over again they would do different.

The real difficulty that confronts the beginner in starting to keep pigeons and in building a proper loft is that he does not know what is before him and what are all the requirements of the various breeds. To help in this work is another aim of this book. In starting you may think you have a better idea, well and good, but you should derive benefit from measuring such ideas with the practical advice of our various correspondents who have given us the particulars of their various lofts for the benefit of our readers.

In a general way, also, we would suggest that the builder should be sure to adopt some method of illumination for on winter evenings when detained by work until after sundown, it is a real pleasure and satisfaction to the pigeon man to be able to go out into his loft and turn on the light to see if all the birds have a full crop and have been properly cared for so as to withstand the rigors of a long winter's night.

Chapter I

Various Nesting Boxes and Nesting Systems

Moore's Style—Pigeon Hole Nest—Englehart's Nest—Brinton's—Long's —Eggleston—Kraft—Prescott—Wall Nests.

AS WAS mentioned in our introductory remarks, it is rather difficult to follow a strictly logical order in presenting particulars of the different kinds of pigeon houses and with due apologies for this seeming lack of method, we will present first some particulars of the various styles of nesting systems. This subject is placed thus prominently for two reasons: (1) Many pigeon men use a part of some building already erected and all they have to do is to install nests; and (2) because the nest is the real home of the pair of pigeons and if it is suitable to their needs, protecting them from their surrounding pigeon neighbors and providing accommodations for their growing youngsters as well as affording a place for the next pair of eggs, it will be satisfactory and produce results.

Many pigeon keepers think any old kind of a "pigeon hole" is good enough for this purpose and while this may be true in a commodious loft where there are pigeon-holes to spare, it will fail in a small loft or where the numbers of breeding pairs are more numerous.

One of the main points in planning a nesting place is to afford facilities for the second nest of eggs, while the pair are still feeding their squabs. Of course, the nest should be easily cleaned and easily kept free from vermin. These are really important considerations which will be explained in the detail descriptions of the various nesting places which will be illustrated.

Perhaps the best way will be to mention these nesting arrangements as near as possible in the order of their historical order; or as near to it as it is possible to list them.

The first and oldest nesting arrangement of which we have been able to trace any authentic record is the box as described in Fulton's Book of Pigeons. The earlier works simply mention the placing of a board slanting against a wall to afford a hiding place for the mated pair and behind which it was customary to place the regular clay nest-bowl.

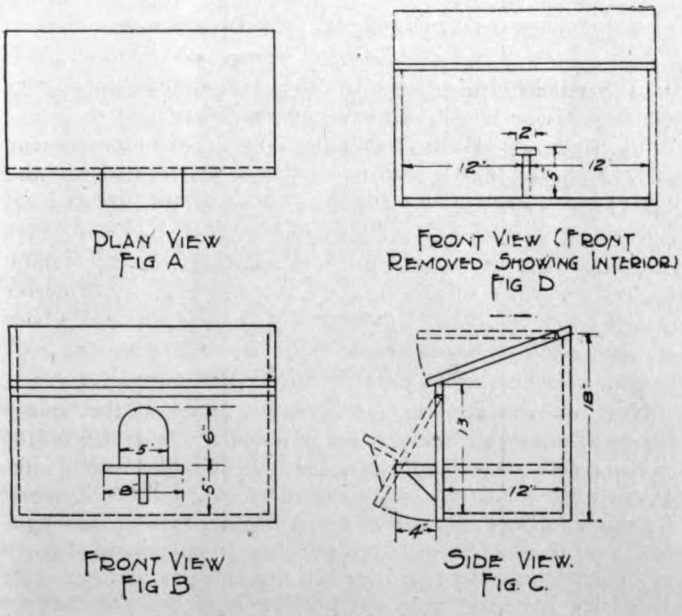


PLATE I—FULTON'S NEST PLAN.

Fulton's nest is illustrated in detail in Plate I herewith which gives four views of same which will show anyone familiar with plans all the details necessary. But, for those not familiar with such details, we will give a brief explanation. This is simply a box 24 inches long and 12 inches wide with a sloping roof which is 13 inches high in front and 18 inches high in the rear, or portion supposed to be placed against the wall of the coop. This box is divided into two parts by a board 5 inches wide set on edge which makes two compartments of the floor measuring 12x12 inches. In the front there is a small pigeon-hole for entrance and exit. It is intended that the pair will make a nest in one side and after that is hatched they will make the next nest in the opposite side.

The original design, we believe, had a hinged cover to permit the keeper to raise it and examine the young. Our draughtsman has suggested that by the use of a couple of wire nails driven into the ends of the front near the top, it might be made to swing outwards, which would facilitate the "cleaning out" of the nesting place after it was vacated by the young. This seems to be a wise suggestion and one that will be found to be helpful should this kind of nesting place be adopted.

But it is the writer's opinion that we have today better nesting places as we shall see, although there may still be many lofts, especially those located in an attic where this kind of nesting place may be most suitable. In our estimation, the chief fault of the old style as originally illustrated was the difficulty of cleaning out, which this plan obviates. For, in one such nest as we constructed, it was found that the male was disposed to roost inside on the division board and, of course, this quickly soiled the interior and made it really inhabitable for the next pair of eggs.

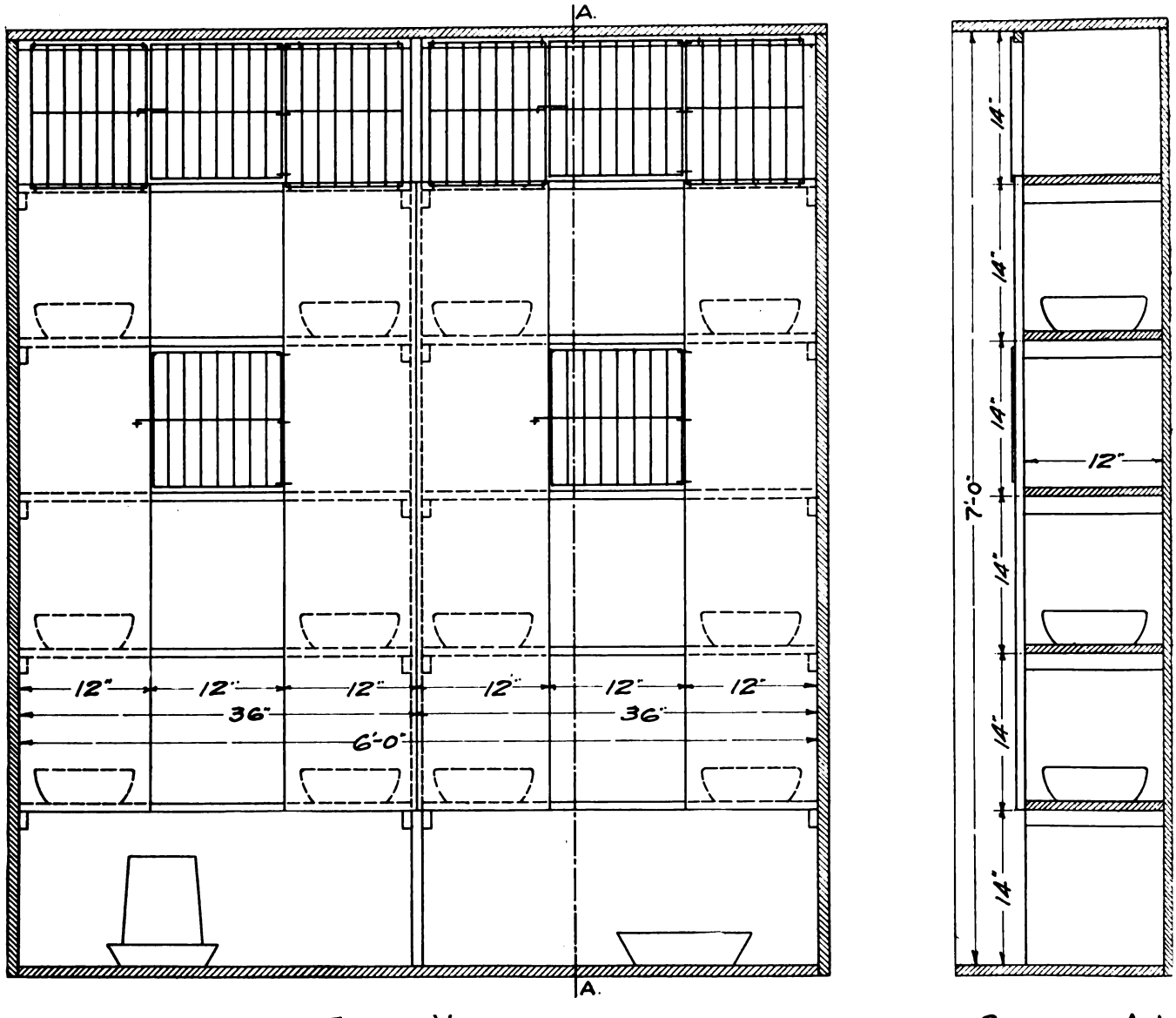
Moore's Style Pigeon Nest.

Also, in Fulton's Book of Pigeons, we find another illustration as shown in Plate II, which Mr. Lewis Wright, the Editor, states in his work in Practical Pigeon Keeping, is after Moore's suggestion.

This illustration shows the elevation of a series of nesting places, or breeding compartments supposed to be located in the end of a loft. There are four tiers of nesting places with a space below for water fountain and grit hopper, etc., and two compartments above for mating places, or for inclosing a bird or pair that might have to be confined by themselves for a short time.

It will be noticed that these compartments are three feet wide and 14 inches high and the sides, behind which are placed the nesting bowls, are supposed to be covered with foot wide lumber, while the center 12 inches is covered with a temporary wire door which can be removed after the pair of pigeons are located therein.

This systm has apparent advantages in that it is silghtly larger and the contrivance for confining the pair until they are at nest is a valuable addition. But, those who use such a system are cautioned that you must exercise judgment when you liberate the birds from such an inclosure the first time.



FRONT VIEW
FIG. A.

SECTION A-A
FIG. B.

PLATE II—MOORE'S PLAN FOR PIGEON NESTS FROM LEWIS WRIGHT'S PRACTICAL PIGEON KEEPER.

The best plan would be to close up all the openings except the one you wish to open and let this pair have the loft to themselves for the day, or at least half a day, or until they had found their way back to their nesting place; when the next pair could be liberated under the same circumstances and in this manner all the pairs would eventually be settled and learn their proper nesting place.

While the plan from which this drawing was made did not indicate the method of construction, our inference is that the material was all permanently fastened in place. But, in accordance with our idea of ease in "cleaning-out" this plan shows that the uprights are put in place with cleats nailed to them, upon which the shelves are placed. Then, if the foot-wide boards on the side are either hinged at the sides or only semi-fastened so they can be removed, it would be an easy matter to take them off and by also removing the shelves it is an easy matter to whitewash the whole interior of the nesting place which would put it in a fine sanitary condition and which should really be done at least twice a year (spring and fall).

As we take up the subject of squab nests, it will be later seen that the Cushman nesting system is a modification of the plan by Moore which we have just reviewed and the interesting thing about this is that the progress of improvements is very slow. This is due, no doubt, to the lack of monthly magazines to disseminate the information about pigeon keeping and also to the indifference some fanciers have in their efforts to seek for real improvement in the art of pigeon keeping. The average man seems prone to follow along in the rut made by his neighbor; but it is the few of original thinkers who are leading the way to better things.

Squab Breeding Nests.

Next we will undertake to examine some of the several styles of nest which have come into use and been devised by various men who have undertaken the development of the squab raising industry in this country; or, perhaps it would be closer to the truth, to say devised by those who have written upon the subject of squab raising. In describing these, it is almost impossible to follow historic order as in some cases the dates have not been fixed. But, it is believed that we will get pretty close to the mark as the writer has on file prac-

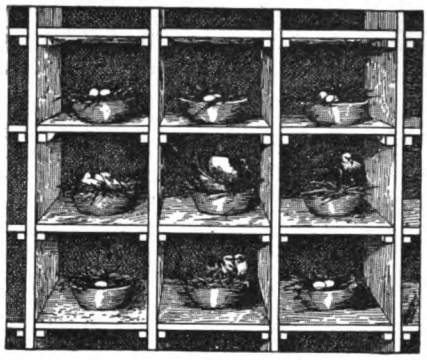
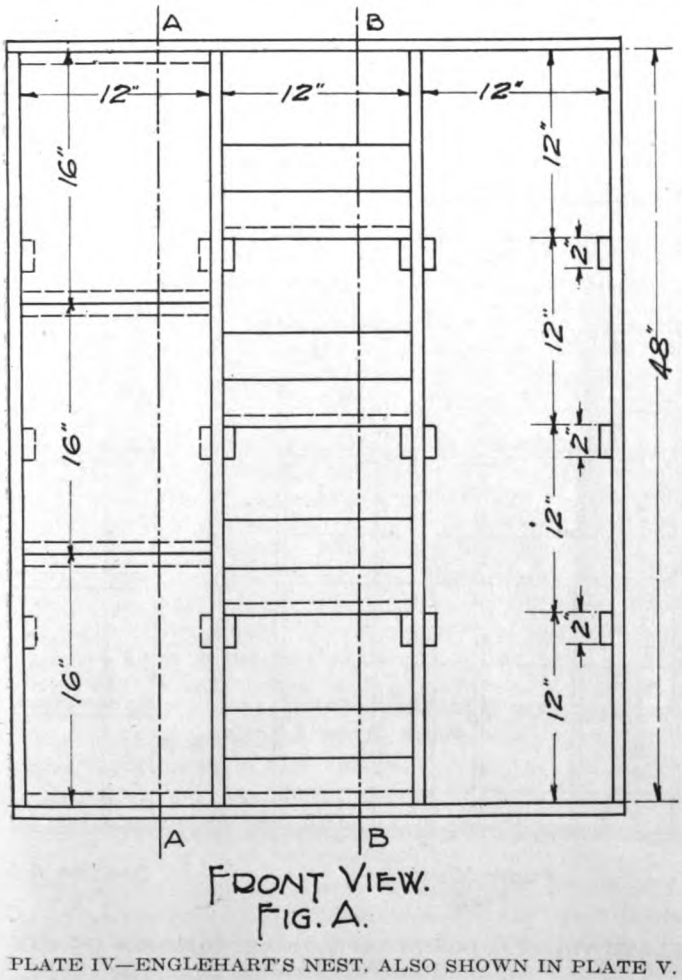


PLATE III—FIRST AMERICAN SQUAB NEST SUGGESTION.

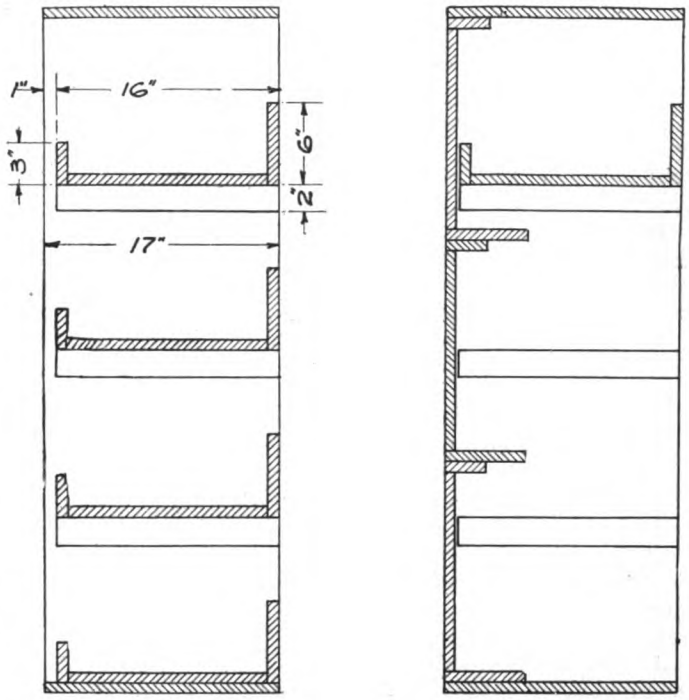
tically all the books ever published on squab raising in this country; and we must add that as squab producers the United States breeders have been the pioneers, for while farmers in Continental Europe did raise young pigeons and send them dressed for market across the Channel to England, such young pigeons were raised in small numbers by any one individual. In fact, some farmers had only one or two pairs and investigators have reported that nowhere in Holland, France or Belgium could be found squab farms with one or two thousand squab breeding pigeons at work producing squabs for market like is to be found in several places in this country. Hence in this work, the United States breeders have been pioneers and have had to invent devices to meet their needs.

In looking through the files of our paper and also the books in our library, it appears that the first style of nesting place suggested and recommended was the common pigeon-hole



FRONT VIEW.
FIG. A.

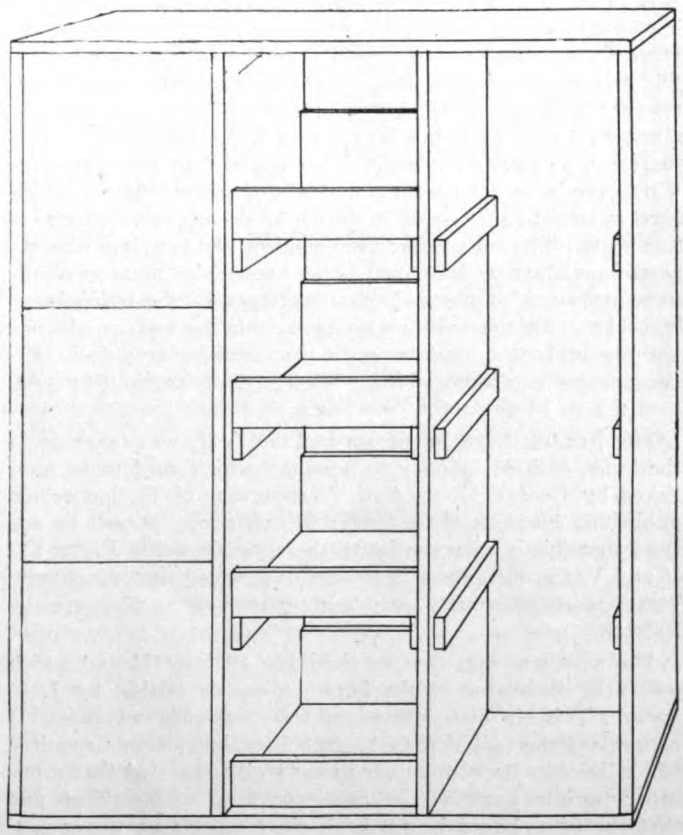
PLATE IV—ENGLEHART'S NEST. ALSO SHOWN IN PLATE V.



SECTION B-B
FIG. B.

SECTION A-A
FIG C

PLATE V—SECTIONAL VIEW OF ENGLEHART'S NESTING SYSTEM, SHOWING HOW THE NEST BOTTOMS CAN BE STACKED TO CLOSE ONE TIER OF OPENINGS.



PERSPECTIVE VIEW.

PLATE VI—PERSPECTIVE VIEW OF ENGLEHART'S NEST ARRANGEMENT.

style as shown in Plate III. This was usually made by using foot wide lumber and building a number of foot square pigeon holes against the wall of the room in which you expected to raise squabs. This method worked well enough if the breeding pairs were not crowded. But, as the necessity of breeding more pairs in the breeding room in order to get greater production without adding to the cost of building became apparent, there was increased trouble caused by the pigeons fighting for possession of certain nests. And, in many cases, this resulted in half-grown squabs being found on the floor of the pen, or dead in the nest from being trampled upon by the fighting birds.

With this style of nest it became almost impossible to introduce an additional breeding pair to a loft of working birds, for the pairs in possession would fight off the new comers and make trouble. Also, these small, square pigeon-holes were rather troublesome to keep clean and the scraping and cleaning always disturbed other breeding pairs.

The first suggestion, therefore, seemed to be to build these square pigeon-holes by fixing the uprights stationary and by nailing to their sides a series of cleats upon which the shelving boards could be placed. This, of course, provided to the removal one or more of these boards and thus facilitated the cleaning.

In Dr. Truebenbach's book, to which we have referred, we find a very clever modification of this form of nest which apparently overcomes some of these difficulties. This is illustrated in Plates IV, V and VI.

This is called the Englehart's nest and in Fig. A, Plate IV, it will be noticed that it is the simple style of pigeon-hole nest in which the shelves rest upon cleats nailed to the uprights. But in Plate V, Fig. B, which illustrates a section B-B in Plate IV, Fig. A, it will be noticed that these shelving boards have a small piece nailed to the front and back to serve as a protection to the birds and really they make of this pigeon-hole a nest box. But these bottoms, also serve another purpose, as is shown in Plate V, Fig. C, which is a sectional view of Fig. A as through A-A. Here we see that these bottoms can be placed on edge and that three of them will serve as a cover for four nesting pigeon-holes, which leave a smooth surface as is shown in the Plate VI, Perspective View. This, of course, removes from the breeding pigeons any opportunity or desire to occupy unoccupied nests and thus overcomes one of the main disadvantages of the old pigeon-hole nest. But, in our opinion, even this method, would not entirely prevent a vigorous cock from making trouble in settling a new pair along side of his nest; but, as we have said, it is a step in the right direction.

The Brinton Nest, as shown in Plate VII, was taken from the book, entitled "Money in Squabs," which used to be published by George Howard of Washington, D. C., but which publishing business is no longer in existence. It will be noticed that this is very similar to the style shown in Plates IV, V and VI; in fact, there is reason to suppose that the Englehart nest of Germany was a modification of this one by Brinton.

The next step was that as shown in Plate VIII and which was first illustrated in the book on squab raising by J. C. Long. This, in our estimation, was a step in advance. It recognized the fact that fast squab breeding pigeons required two adjoining places for their nests; so it suggested that every other upright partition be narrower than its neighbor and that the front board be set back close to this narrower partition, giving the formation of nesting places as shown in the Plan View in Fig. A. This style was outlined about 1902 or 1903 and your attention is called to the similarity of this plan to that of the so-called Eggleston Nest, which we also illustrate and explain later. In this nest the wider uprights

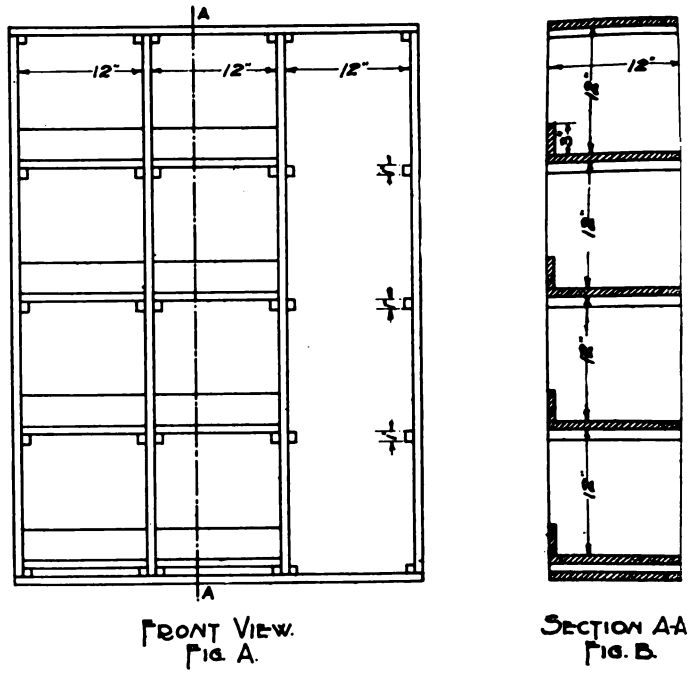
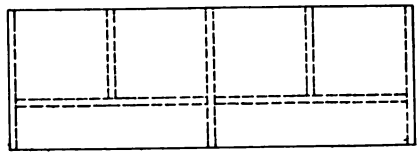


PLATE VII—BRINTON'S NESTING SYSTEM.

are fourteen inches and the narrower nine, and the uprights are only nine inches apart, which gives a nesting place nine by nine inches, and which is about right for Squab breeding Homers. If a larger variety were used, it would be well to make these nesting places a little larger and 11 by 11 inches



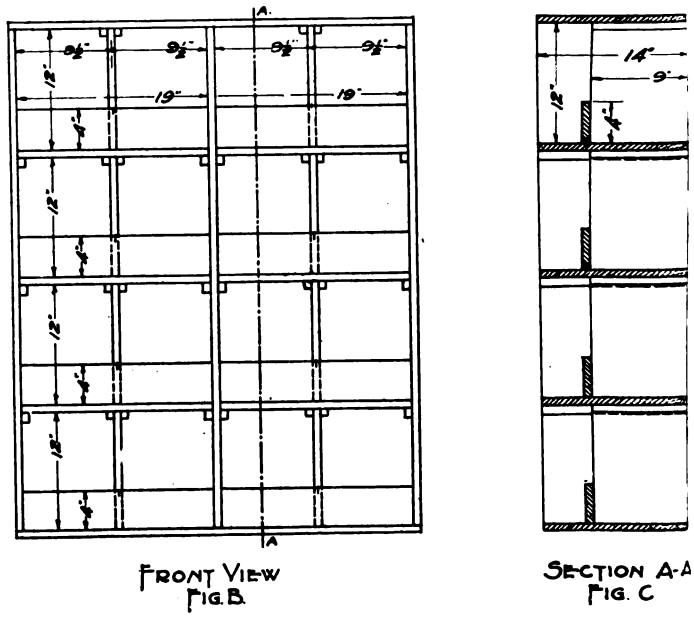


PLATE VIII—J. C. LONG'S IMPROVED SUGGESTION ON THE BRINTON PLAN.

would be about right for the Carneaux and 14 by 14 inches for the Mondaine.

In the actual building of these nests, some builders conceived the idea of cutting the front piece into two parts and making each slide separate, which enabled the keeper to bring in a fresh, clean slide, and quickly remove the soiled one and replace it with a clean one after the squabs were sent to market. It will be noticed that this could be easily done without disturbing the breeding birds.

Plate IX illustrates the so-called Eggleston nest to which we have referred and the reader will notice that it is very similar to the Long nest which we have just explained, although there is a slight difference in the nest bottom, otherwise they are almost identical and we believe that Mr. Long should have the credit for this, as Mr. Eggleston did not announce his design until about 1913, or ten years later than Mr. Long's book.

The next style, in chronological order, was the Kraft Nest, also shown in Plate IX. This style has also become known as the nest with the shelf and sometimes the shelf is placed at the back and sometimes at one side. The idea of this nest, being that the nest bowl is placed upon the shelf for the first nest, and after the young are hatched it is lowered to the floor of the nest and a new nest bowl is placed upon the shelf for the second pair of eggs. This shifting is continued through the season and it is generally found that the squabs on the

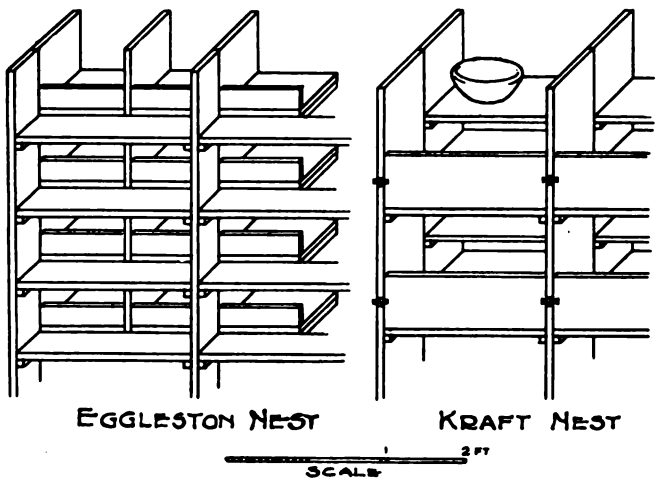


PLATE IX—THE USEFUL NESTING ARRANGEMENTS.

floor of the nesting place will remain there and not try to crowd the hen while she is getting the second nest ready. At the same time the cock pigeon is reminded of his feeding duties to the young squabs every time he enters to carry stems or sticks for the building of the second nest; hence, the young squabs are not neglected as they might if the second nest were being built in some other part of the loft away and out of sight of the squabs. The dimensions of this nest, which are not given in the drawing, are 24 inches wide, 18 inches high and 24 inches deep, with a 12-inch wide shelf in the rear, located 8 inches from the floor of the compartment. The front is semi-closed by an 8-inch wide board, held in place by a couple of turn buttons.

Nesting Arrangement for Squabs.

In reply to your request for a description of our nesting arrangements, as used in connection with our squab production, I would say that it is rather difficult to describe it in such a way as to make it clear, but I enclose a rough pencil

PLATE X—THE PRESCOTT PLAN.

sketch, adapted from a photograph, which will show quite clearly how it is constructed. The nest slides are all made separately, and cleated in such a way as to slide in and out on corresponding cleats on the vertical partition walls, as shown by the one slide in the sketch, which is drawn forward at the center of the diagram, showing cross piece, which forms the front of nest compartment.

This arrangement of nests is quite a little work to construct, but we have found it most satisfactory in practice, giving each pair of breeders a set of two-nest compartments, each eleven inches deep, wide and high, measuring in the clear, the thickness of the lumber making the divisions one foot apart on centers. Each set of nest compartments has a lighting board in front, two feet long and six inches wide, where the mate of the bird occupying the nest is usually found at night, unless they are running both eggs and squabs at the same time, when one bird is on each nest. Each double compartment is cut off on each side by a full width partition from the adjoining compartments, so that if the birds are properly mated, there is no trouble with fighting in the loft. Of course, there are occasional cases when a pair do not use the two sides of a double compartment, but may make a second nest in some other part of the loft, but this is an exception and not very common.

These nests are simple, easy to clean, and require no nest bowls (or nappies), which we have found only a nuisance to keep clean, and of no advantage whatever, when nests are properly designed. All this extra work which can be cut out means a good deal of money saved, when you are running a plant of several thousand birds, and we try to have everything so arranged as to reduce the labor bill to the minimum, while keeping things in good sanitary condition.

CHARLES E. PRESCOTT.

Cushman Standard Nesting System.

Of the later styles of squab nesting arrangements, we have the so-called "Cushman Nest", which, coming later, has some advantages over the preceding styles and therefore commends our careful attention. In several aspects it is a step in advance and could be adapted to the breeding of almost any variety of pigeon. Of course, in some points it follows "Moore", as we have already mentioned, but there are enough of originality in arrangement to give it the inventor's name.

Plate XI illustrates the details of this arrangement. Fig. A on this plate shows a section of three nests from a group which is supposed to be located along the partition of the squab house. Section 1, or the upper nest, shows the two compartments open with the two nesting divisions in place. Section 2 illustrates an apartment with a nesting place on the right and a squab confining place on the left. The purpose of the latter is to keep the squabs in their nest space until

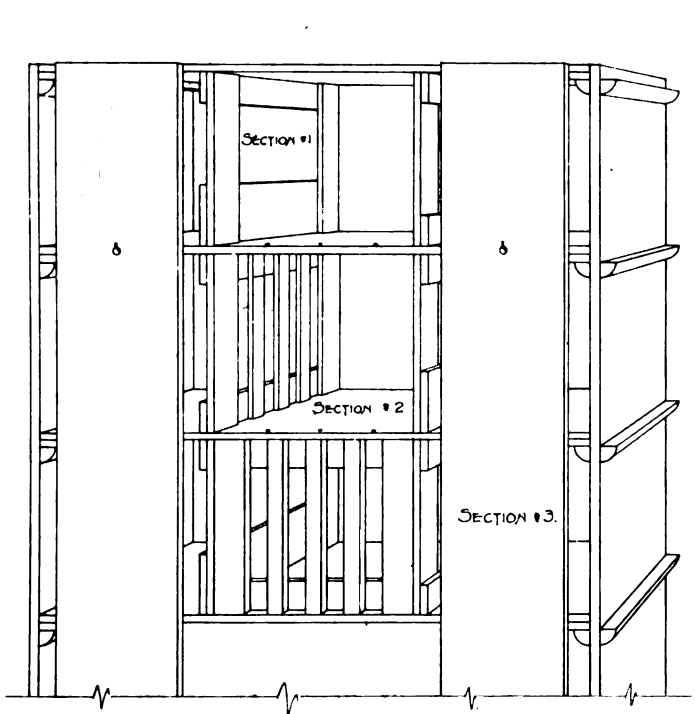


FIGURE A.

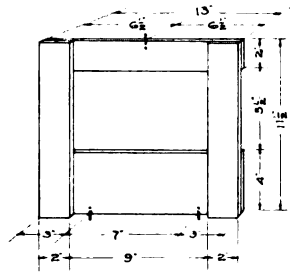


FIGURE C.

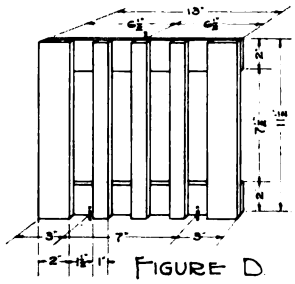


FIGURE D.

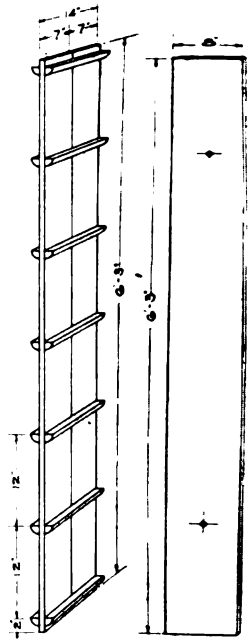


FIGURE E. FIGURE F.

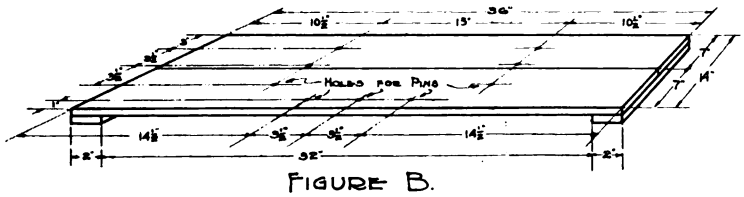


FIGURE B.

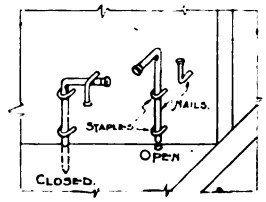


FIGURE G

PLATE XI—DETAILS OF THE CUSHMAN NESTING SYSTEM.

they are of the proper squab age for market purpose and also to prevent them from annoying the adult birds in their building and fixing the next nest; it will also prevent any other birds from getting into the nest where the squabs are and injuring them. This is a splendid feature of this system. Section 3, Fig. A, shows the compartment closed to all outsiders and in this condition it is very suitable for mating a pair of pigeons. By using the squab confining section, as in Section 2, it would be possible to confine the hen in one side for a few days should this be necessary. Such an arrangement is necessary with adult birds, or with birds that have been separated in the middle of the breeding season. Under such circumstances, it is wise to confine the hen in the smaller compartment, and place the male in the larger side for a few days, then the "squab confining" partition may be removed and the pair will mate without further trouble. It might be here mentioned for those who are reading about pigeon raising for the first time, that when the birds "bill" they are said to be "mated." When they are mated, the front can be removed and the birds allowed the liberty of the loft. This, then, will be their home and their permanent nesting place.

A little study of the figures on this plate will reveal that the construction is of the semi-portable style. The compartments are made by uprights with cleats attached for supporting the nest floors. The partitions are easily removable because they are held in place by headless nails which insert into holes bored into the base boards, as are shown in details in Fig. B in this plate.

Fig. C gives a detail of the nest division, and this division is held in place by headless wire nails driven into the top and bottom, but left protruding about half an inch. These fit into corresponding holes, bored in the bottom of the nest, as shown and mentioned in Fig. B. The idea is to have two nails in the bottom and one in the top of each division.

Fig. D gives the details of the mating, or squab confining division. This is also held in place by headless nails the same as the front division. By being careful to locate these nails exactly in the same spot, it would make all of these divisions interchangeable. This exactness could be easily maintained by boring holes in a strip of wood of the same length as the division and using this as a guide in fixing the location of the holes and the nails in all divisions.

Fig. E gives the details of the upright partition and which is really the first part to be constructed and located. By exercising care in making this division and locating it exactly in relation to the other divisions, you will have a neat job for the whole nesting system.

Fig. F gives the details of the nest-front division. It also has holes bored in it so as to be held in place. An angle screw should be placed in these bottom boards at just the right place to divide the distance between the upright division and the nest division.

Fig. G illustrates another way of fastening these divisions in place and is made from bent nails and small staples. This is a rather unique device and is here represented with the thought, that if the builder did not want to use it here, it might be available for some other place.

In getting out the lumber for this nesting system, it should be borne in mind that the most inexpensive lumber will do.

All, but the upright section for holding the bottom boards, should be made of resawed inch lumber, planed one side to bring to a uniform thickness. This allows you to get two strips, inch thick stock, and brings the cost down very low.

Detailed Specifications.

(Large Breeds)	(Small Breeds)
7 bottom boards 36x14 inches.	24x12 inches.
A 14 pieces 36x7x7-16 inches.	24x6x7-16 inches.
B 14 pieces 14x2x7-16 inches.	12x2x7-16 inches.
6 nest divisions 13x11½ inches.	11x11½ inches.
E 6 pieces 13x4x½ inches.	11x3x½ inches.
C 12 pieces 11½x2x7-16 inches.	11½x2x7-16 inches.
D 6 pieces 13x2x7-16 inches.	11x2x7-16 inches.
6 mating divisions 13x11½ inches.	11x11½ inches.
D 12 pieces 13x2x7-16 inches.	11x2x7-16 inches.
C 12 pieces 11½x2x7-16 inches.	11½x2x7-16 inches.
F 18 pieces 11½x1x7-16 inches.	11½x1x7-16 inches.
1 section division 6 ft. 3 in. x 14 inches.	6 ft. 3 in. x 12 inches.
G 2 pieces ½ ft. 3 in. x 7 in. x ⅝ inches.	6 ft. 3 in. x 6 in. x ⅝ inch ¼ round, 12 inches long.
I 14 pieces ¼ round, 14 in. long.	
2 nest fronts.	6 ft. 3 in. x 5 in. x ½ inch.
H 2 pieces 6 ft. 3 in. x 8 in. x ½ inch.	

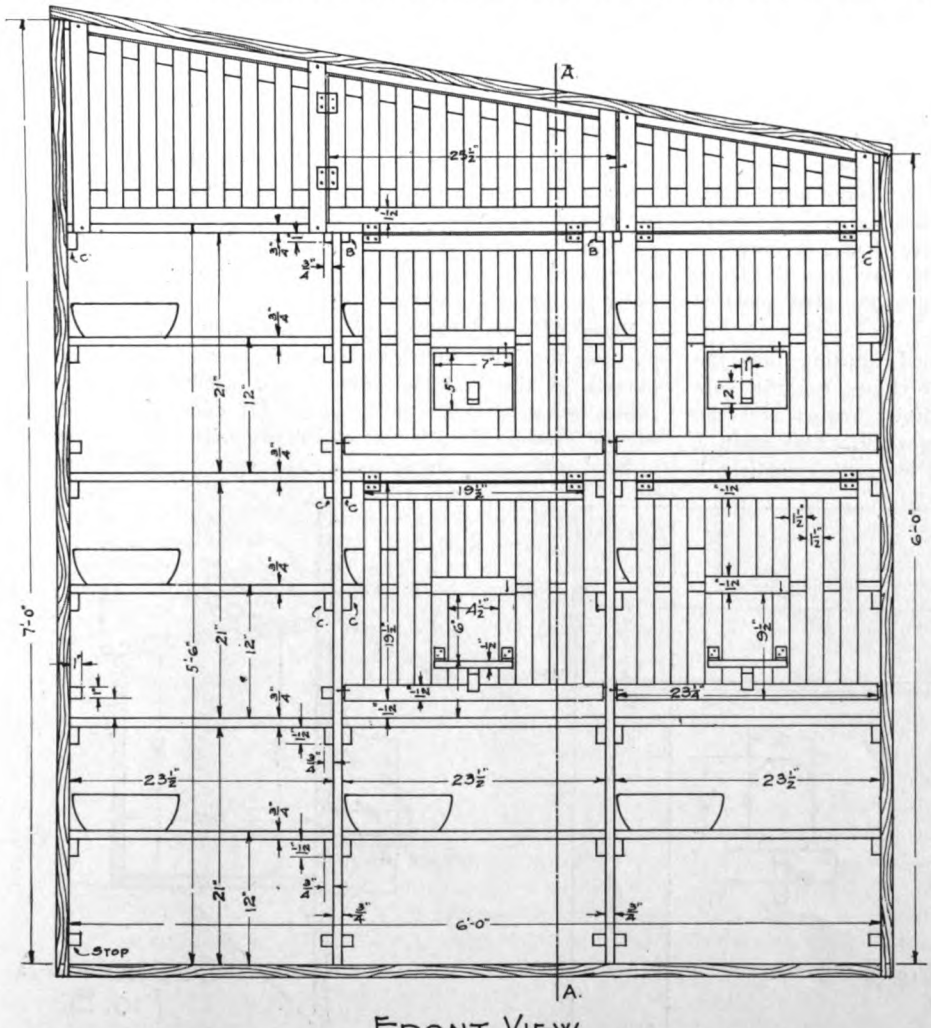
A Racing Homer Nesting Arrangement.

Plate XII illustrates one style of nesting place as used by Racing Homer men and this plan is supposed to fit into the end of a shed-roof racing loft. Only four of the nesting places are shown with their fronts, the others are left open to permit of indicating the details of the interior arrangement. It will be observed that this is an adaptation of what we have called the Kraft nest, as shown in Plate IX, or what might be called the shelf plan of nesting place, with the addition of a front to permit the confinement of a pair during the breeding time.

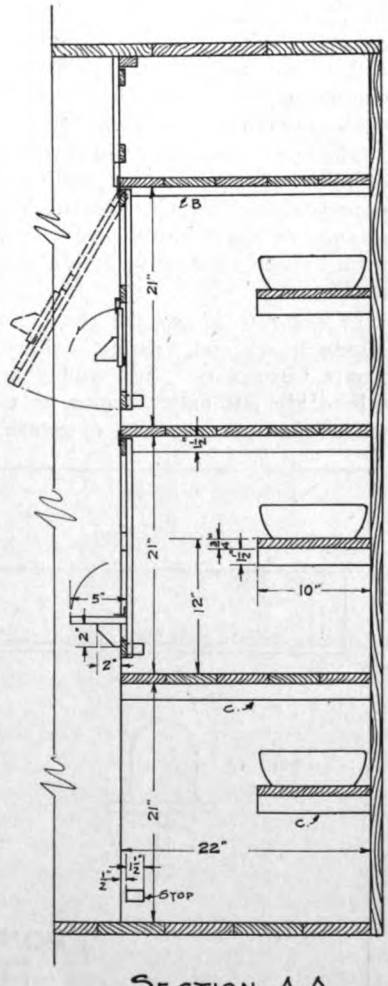
Above the nine nesting places there is a compartment slatted off for the purpose of cooping odd birds or a bird that might have returned from a long race and which it was your desire to keep quiet for a day or so. Fig. B shows a cross section of these nests and the details shown will give a very clear idea of their construction and arrangement. The shelf may be supported upon pieces nailed to the sides of the uprights, or upon iron brackets, or simply by two pegs, 10 inches long, driven into a three-quarter hole bored into the back wall. If pegs are used, care should be exercised to have them project out as far as the board is wide, or otherwise the board of the shelf might tip off; as it is unnecessary to have this shelf the full length of the nesting place.

Notice the whole front is hinged at the top which permits raising it to clean out the nest and in the center of this front there is a small, square opening intended to be used as an entrance for the birds. This, too, has a hinged covering which can be raised or lowered to close or open, so that specific parts are under the direct control of the pigeon keeper.

Such nests are easily constructed from flooring dressed on two sides. But, if this lumber is used, we would recommend that the tongue and the groove be planed off from the outside edges, which will make a neater fit all around.



FRONT VIEW
FIG. A.



SECTION A-A.
FIG. B.

PLATE XII—A RACING HOMER NEST ARRANGEMENT SUGGE

In the first place, it is cheap and easy to construct, and I like the idea of having the nest pan with eggs up where the squeakers cannot bother the setting birds.

I keep racing pigeons and it is very desirable they should not be pestered and worried by the young ones at all times. It spoils their condition. When the young are old enough to ring, I put them in a clean nine-inch pan on the floor of nest box and give the old birds a clean eight-inch pan for the next lot of eggs, placing it upon the shelf, which is raised twelve inches from the bottom of the nest box.

Every part of my boxes is removable and the only fixtures are the cleats for holding and the floor of the boxes. The two upright pieces making the partitions are just screwed to the floor and top piece by one screw in each end and the floor and the shelves just slide in.

I start by putting on the top board 5 feet 6 inches from the floor. This piece (6 ft. x 22½ in.) is made from five pieces of tongued and grooved 4½x¾-inch pine, and is held together by 1x1-inch cleats, which are placed at the right distance so that the upright partitions can lean against them. Next place the upright partitions (made of the same material) into position. Of course the necessary cleats will have been placed on them before erecting, and these cleats will hold the partition solid.

Use a level and mark off on the sides of the loft the position of the cleats required for holding the floors and shelves. These cleats should be screwed on, as they are then easier to remove in the fali. The dimensions of shelves and floors are given in the plan, and these simply slide into place. The fronts are made of ordinary lath spaced about 1½ inches apart. A space should be left between the bottom of front and floor of nest so that the floor can be scraped off without disturbing the birds. The fronts are hinged at the top and open outward when required to change pans, etc.

The opening in lath front is fitted with a sliding piece made of lath and a projecting shelf of ½-inch wood 7x5 inches provides a landing place for birds. These fronts are kept in place by a small button and a small stop prevents the front from swinging inwards. I think the rest of the plan explains itself.

In order to lessen the chances of birds getting into the wrong boxes and fighting, I have two colors for the nest fronts. Boxes 1, 3, 5, 7 and 9 are stained brown and the others are left natural color or whitewashed. This stain I make from permanganate of potash, and ten cents' worth will make a pint of stain and two coats will give a good dark brown color.

When birds are first penned up for mating, I let those in the dark-fronted boxes out one day and the others the next until they get settled and know where they belong. This prevents lots of trouble.

Small tins will readily hang on the bottom of the front for feed and water when birds are kept penned up. If any beginner (old hands not barred) requires further information I shall be glad to write to answer any question.

The top part of the nest box extends across from side to side of the loft and is very useful as a hospital or place to keep a bird penned in for any reason. I have no use for a hospital myself except in case of accident. When a bird falls sick I wring its neck, which is a sure cure for all diseases.

A Barn Wall Nest.

Plate XIII illustrates a method used in Germany to fix a nesting place for flying pigeons inside a barn wall, with a projection outside to keep out the rain, snow and sleet. Fig. A shows the exterior front view which really consists only of a small bracket perch at the pigeon hole entrance, another bracketed projection to keep out the rain and a dividing board, "B", to prevent a vigorous male from monopolizing both openings at the same time.

Inside the wall of the building, is a box arrangement to serve as a nesting place for the pigeons and, according to this plan, it is similar to the one illustrated in Plate I of this section of this book; or it may take the shape of that shown in Plate XIII, herewith, which arrangement is also taken from Dr. Truebenbach's work on pigeon house construction. This is a nesting box with an entrance compartment and an inner compartment for the nesting place.

In Plate XIII, Fig. B, it will be noticed that both the top and the side is hinged so as to permit the opening of same for cleaning purposes. In practice it may be unnecessary to have both the top and side opening and it is the author's impression that the side opening alone would be sufficient, especially if the roof was on a level.

Plate XIV illustrates a pigeon breeding place for a similar purpose to XIII, but in this case the coop is fastened to the outside of the building and is two storied instead of two coops being placed side by side. Of course it could be of several stories, if such was the desire of the owner, and this is here submitted simply as a suggestion to show the essen-

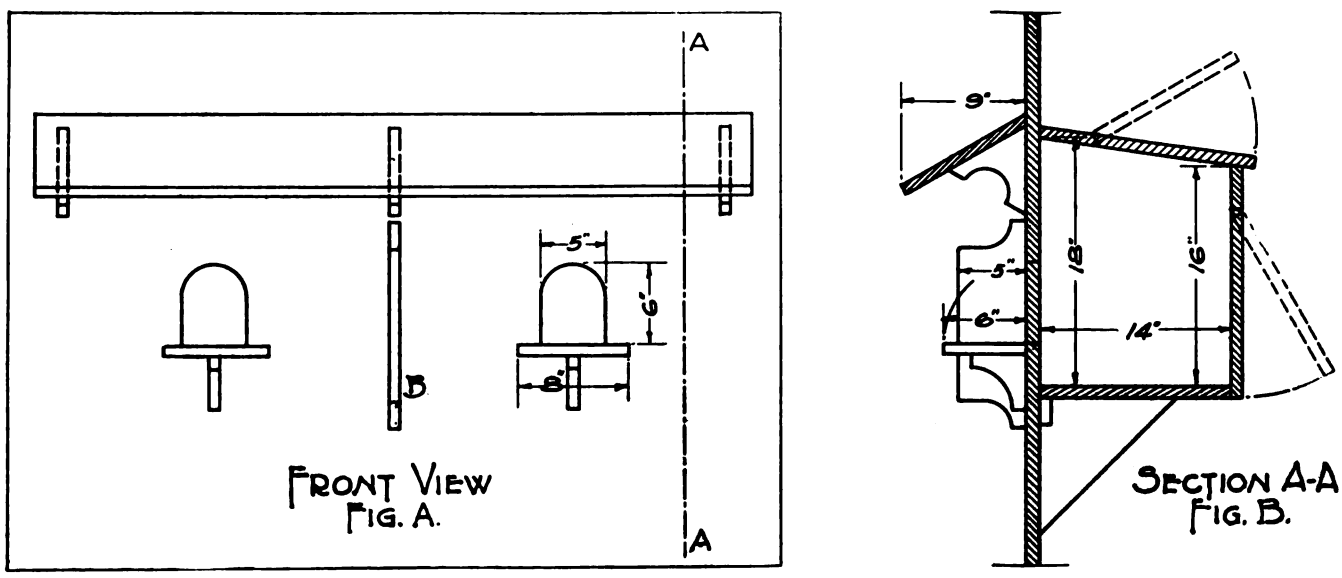


PLATE XIII—A BARN WALL NESTING PLACE FROM DR. TREUBENBACH'S GERMAN WORK ON PIGEON HOUSES.

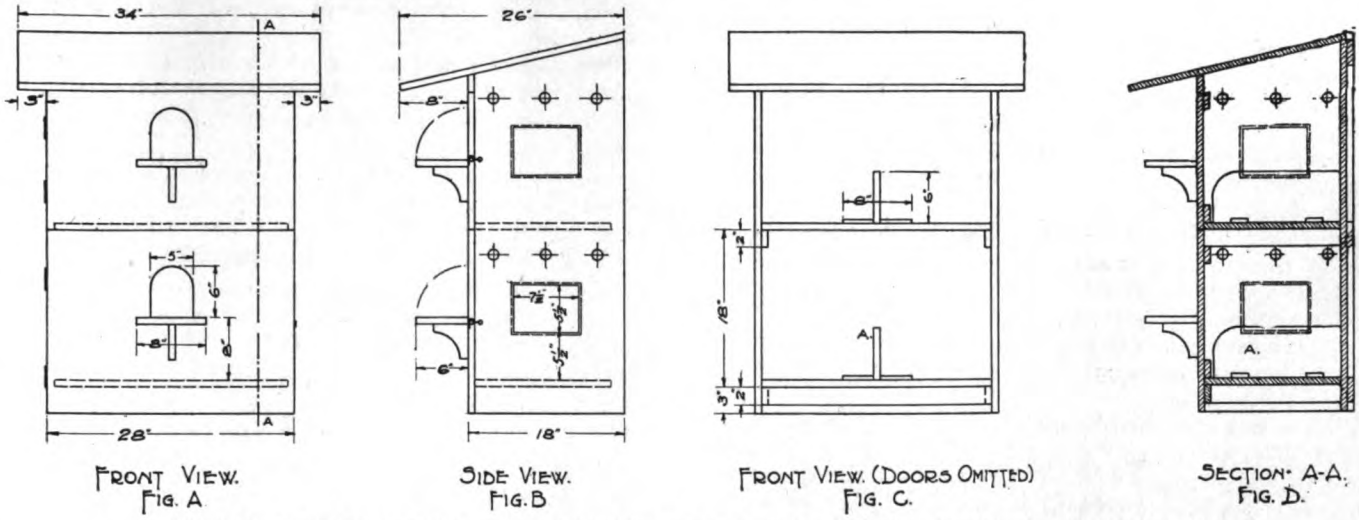


PLATE XIV—A DOUBLE DECK WALL NESTING PLACE FOR PIGEONS, AFTER DR. TREUBENBACH.

tial details of such an outdoor coop for flying pigeons. It will be noticed, also, that the interior arrangements are similar to the Moore's nest boxes.

This last nest box, however, has a slight modification of the former one in that there is a small entrance compartment and the entrance is at one side, rather than in the middle. It will also be noticed that the lower portion is hinged so that it can be lowered and the coop more easily cleaned; and the front door at the left wings open so that the interior is easily inspected. In this respect this nest box is somewhat similar to a Rabbit hutch; but it is here submitted because it has different features which might suit the needs of some one or more of our readers.

Review.

A comparison of these various nesting places, reveals that there is somewhat of a similarity among the more advanced types and that the differences are brought into use by the necessity of meeting the habits of the various kinds of pigeons.

Timid pigeons, such as the Fantails, Jacobins, Trumpeters, etc., require more seclusion and retirement in their breeding operations, than the more friendly kind of pigeons like the Tumblers or Turbits. And, again, the Racing pigeon, where the keeper is, of necessity, compelled to pass through the loft quickly on racing day, will require a nest that can be made secluded upon such occasions. The Racing pigeon is also a pugnacious bird and prone to fight with its neighbor, especially in crowded lofts, hence it becomes necessary to have secluded lofts to prevent such occurances. With these inclosed nesting places for Racing Homers, it becomes necessary to use some caution to settle a pair in their proper place, for if a cock bird should happen to get into the wrong compartment there is likely to be a battle royal and pecked eyes, or other damage done before the cock gives up and gets out.

This, however, can be overcome by a little care in the management and settling the birds in their proper place. It has been found helpful also to paint or kalsomine the fronts with a different color so that there are no two fronts adjacent of the same color. It is pretty well recognized that Racing pigeons can distinguish colors and the mobile lofts of the army in the late war were all painted of a different color or design on their roofs to aid the birds to locate their proper loft; and it is believed that this method was a help to the pigeons in this direction.

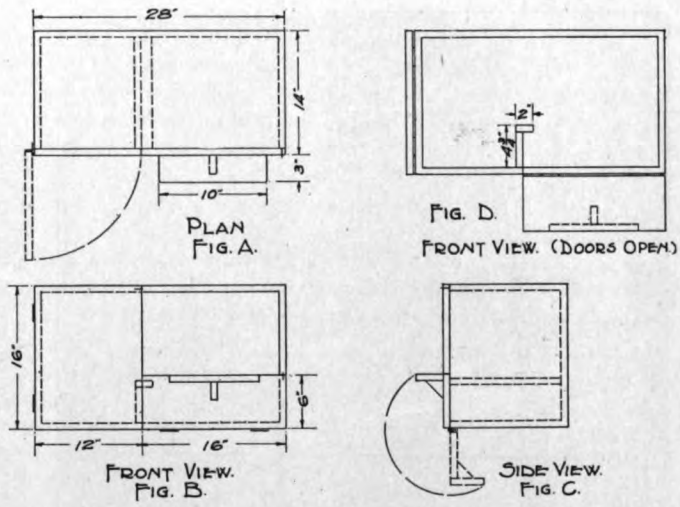
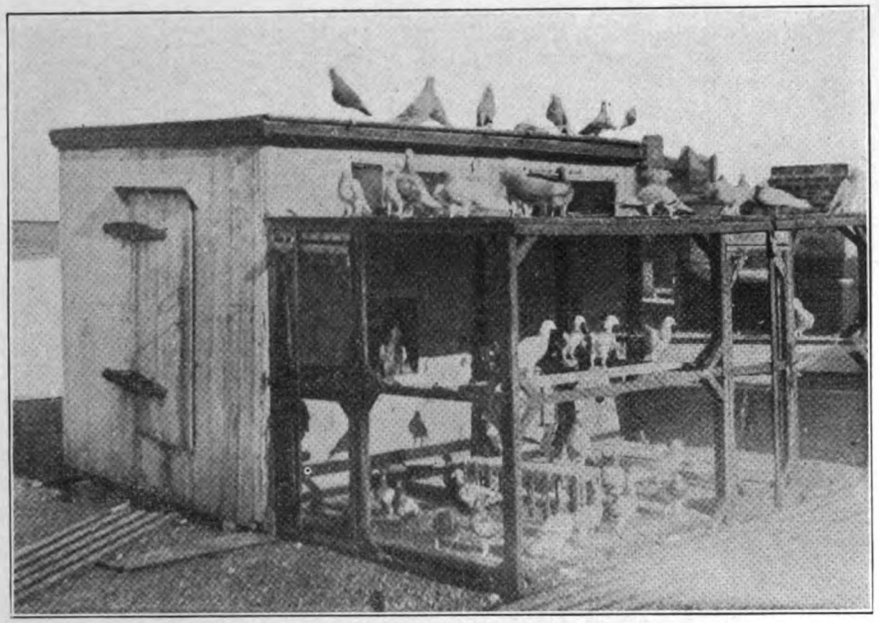
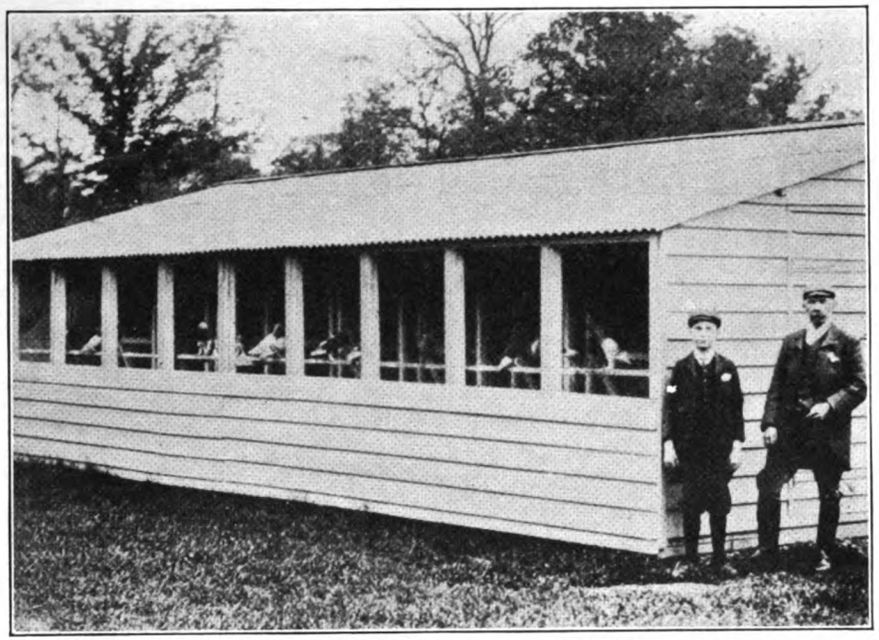


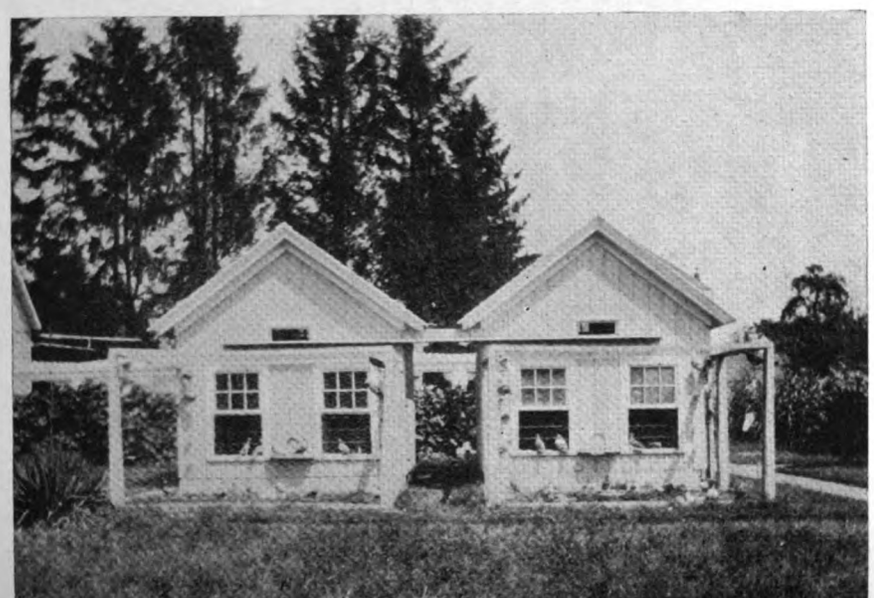
PLATE XV—A MODIFICATION OF FULTON'S NEST.



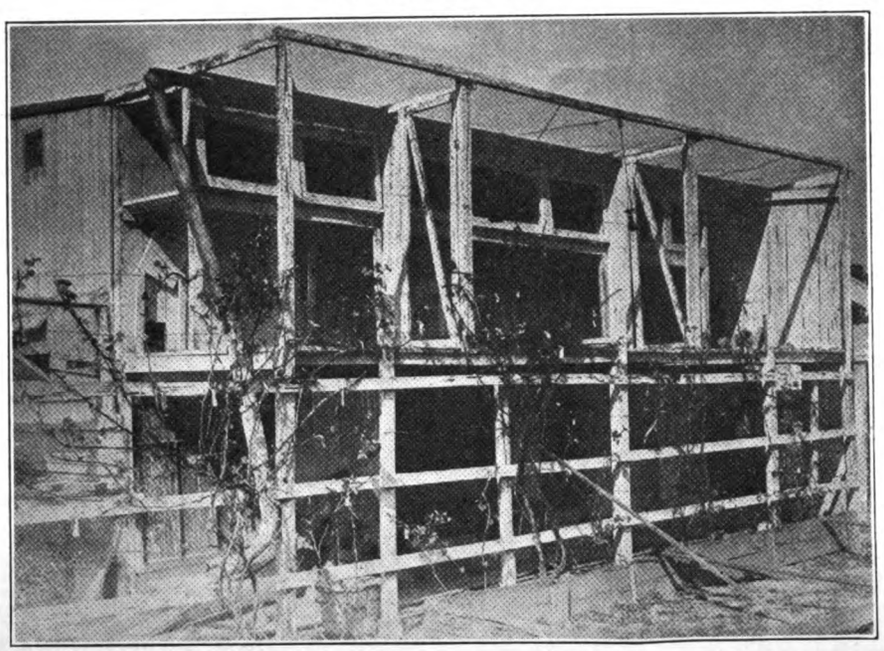
A RACING HOMER LOFT ON A ROOF IN BROOKLYN.
The white space in the rear is Long Island Sound and in the far distance is New York City. The Racing Pigeons certainly get plenty of air in such a location.



AN ENGLISH PIGMY POUTER BREEDER'S LOFT WHICH HAS PRODUCED MANY YOUNGSTERS WHICH HAVE FOUND THEIR WAY TO THIS COUNTRY.



TWIN LOFTS—TWO FAMOUS LOFTS LOCATED IN MASSACHUSETTS.



A FANTAIL LOFT IN LOUISVILLE, KY., BELONGING TO MR. KORB. AS FANTAILS DO NOT REQUIRE HIGH ROOMS IN WHICH TO FLY, THIS LOFT IS DOUBLE-DECKED.

Chapter II

Various Pigeon Houses and Lofts

Small Houses—Squab Houses—Cushman's House and others.

INTRODUCTORY

AS HAS been indicated in our introduction, there are several kinds of pigeon houses, in fact, almost as many kinds as there are men keeping pigeons. In this country, however, practically all such houses are built of wood and to the writer's knowledge of the many different houses and lofts he has visited, there are only two or three places where pigeons have been kept in a brick building. One of these in particular, located in Pittsburgh, Pa., was reported to us as being rather damp and cold in winter, when there was no heat in the garage below.

But, Dr. W. E. Barker, an English Racing Pigeon authority of England, comes out strong in his book on Racing pigeons in favor of brick lofts and expresses himself as follows:

"Nevertheless, brickwork has the great advantage over wood, that it is less susceptible to weather influences, and this point, in such a climate as ours, is far from being a negligible quantity. Wood is apt to dry, and crack, and twist, and for that reason wooden lofts are difficult to keep waterproof, unless they are especially well constructed of sound, well-seasoned material, and it should always be borne in mind that a loft which is actually damp is entirely unsuitable for pigeons. Wooden lofts, too, are cold in winter and hot in summer, and whilst I do not regard the former point as being particularly disadvantageous, for pigeons appear to suffer no ill-effects from any reasonable amount of cold, provided always that it is not associated with dampness, I regard excessive heat in summer as a decided drawback, on account of its influence on the atmospheric impurities always present in a pigeon loft, and also on account of its influence in forcing the moult of the bird at the critical period of the year when the longer races are flown, and when therefore the condition of a pigeon's wing is a point of paramount importance.

"On the other hand, a loft built of brick maintains a far more equable temperature throughout the year than does a wooden one, being warmer in winter and cooler in summer, warm by night and cool by daytime.

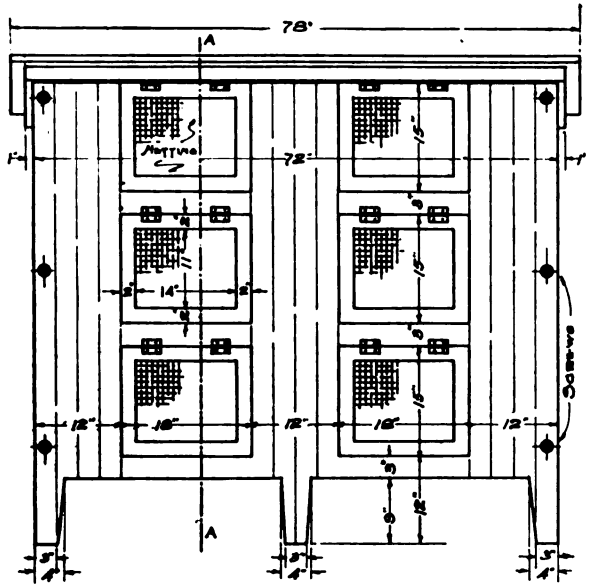
"Another advantage of bricks, to my mind—and I hope to explain the reason for this belief—that whilst sufficiently impervious to wet in the ordinary acceptance of the term, they are still capable, on account of their porosity, of absorbing and retaining in their structures a considerable amount of moisture.

"Now, whilst dampness, in the form of dripping walls, a leaky roof, a wet floor, and a moisture-saturated atmosphere, laden as it is sure to be, with manurial emanations and effleuvia, is undoubtedly harmful to pigeons (and I think that all competent fanciers are agreed upon this point), I personally am of the opinion that there are circumstances, in hot, sultry weather for instance, under which the atmosphere of a loft is too dry, and I regard this excessive dryness as distinctly undesirable.

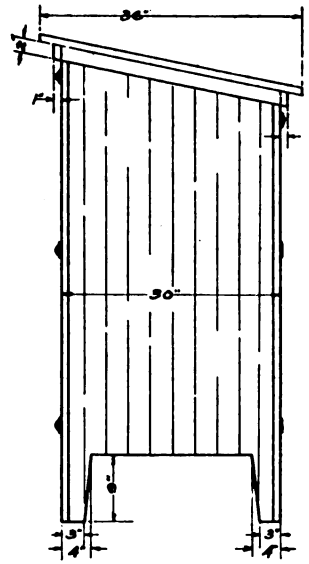
"Some fanciers, whose views are entitled to every consideration, do not, I know, subscribe to this opinion, so I may be allowed to explain that one of my reasons for thinking that the air of a loft may be dry to an undesirable extent, is the fact that excessive dryness is invariably associated with dust, and to my mind a dust-laden atmosphere is a decided drawback in a pigeon loft. Dust injures the feather properties of pigeons; is absorbed with harmful results into the respiratory passages, and it settles on feed and water, along with which it is taken into the ailimentary tract, setting up irritation and looseness of the bowels, which seriously interferes with the conditioning of the birds for racing purposes.

"Excessive dryness of the air is credited, too, with being a frequent cause of youngsters not hatching out from the shell satisfactorily, but personally I am inclined to give only a grudging and partial assent to this opinion, for here, beyond question, the health of the parent birds is the determining factor in the vast majority of cases.

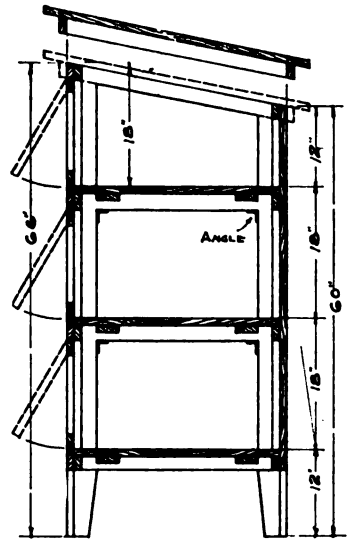
"Now, how can the moisture, which bricks are capable of containing, prevent this excessive dryness of the atmosphere in hot weather, with its concomitant drawbacks, and yet at the same time be inappreciable in the form of dampness? The two statements appear to some extent to be contradictory, and I should like therefore, to take this opportunity of attempting to reconcile them. Readers, who have an elementary acquaintance with the science of physics, will know that water has the peculiar property of being able to absorb an immense amount of heat in warm weather, without itself becoming much raised in temperature. This contained heat, hidden one might almost term it, is known as the specific heat of water, and under lowered conditions of atmospheric temperature, this heat is capable of being given off again to the surrounding air, without the temperature of the water being very appreciably lowered. It is for this reason largely that the temperature of the sea, from summer to winter, and from night to day, is far less variable than is the surface temperature of the neighboring land, and this, too, is the explanation of the fact that small islands, surrounded as they are, by water, do not experience the extremes of heat and cold from summer to winter that fall to the share of vast continental areas of land. This is, by the way, however. Now, if one takes a brick, which has been exposed to the weather, but which still appears to be perfectly dry as judged by ordinary standards, and weighs it, and if one exposes this same brick to the heat of an oven for a few days and then weighs it again, one will find that this weight has considerably diminished in amount, and this diminution represents the weight of the moisture which has been driven off from the brick in the drying process. I do not suggest that the simile—the presence of heat in apparently cool water, and the presence of moisture in an apparently dry brick—is a scientifically accurate one, but it sufficiently elucidates the point which I wish to emphasize, namely, that bricks may contain a considerable amount of moisture and yet the walls composed of them may not be in any sense damp in the ordinary acceptance of the term. In hot weather, however, when the atmosphere in a loft is apt to become excessively dry, this moisture exudes from the bricks and passes into the air, (in a perfectly inappreciable manner) moistening it and tempering it, entirely apart from what we know as dampness, and I believe that this property of brickwork, which is far less evident in stone, and for practical purposes entirely absent from wood, is an entirely bene-



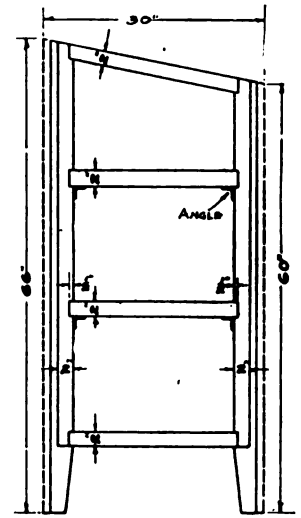
FRONT VIEW
FIG. A



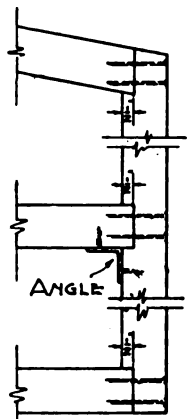
SIDE VIEW
FIG. B.



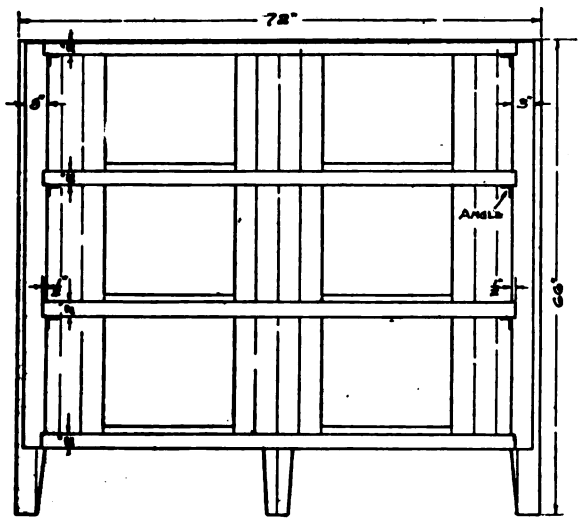
SECTION A-A
FIG. C.



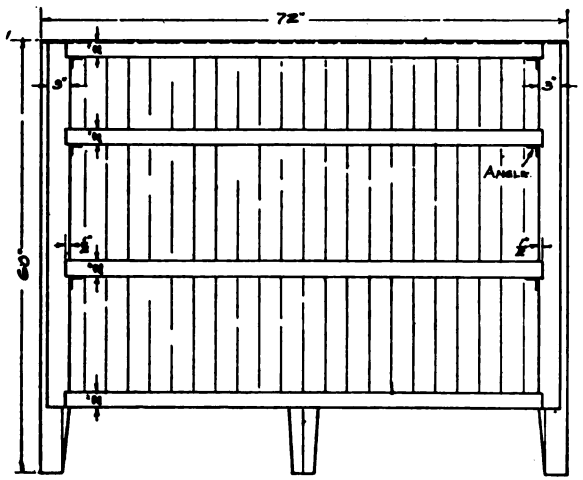
VIEW SHOWING FRAMING
OF END SECTION.
FIG. D



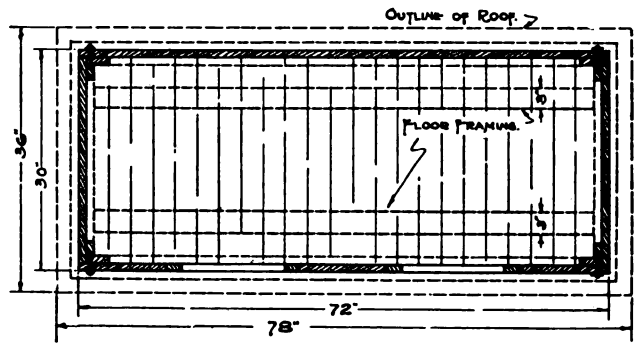
ENLARGED DETAIL
OF JOINTS.
FIG. E.



VIEW SHOWING FRAMING OF FRONT SECTION
FIG. F



VIEW SHOWING FRAMING OF REAR SECTION.
FIG. G.



PLAN VIEW.
FIG. H.

NOTE: PLAN VIEW SHOWS DETAIL OF FLOOR SECTION, SHOWS HOW SIDE AND END SECTIONS FIT TOGETHER AND HOW ROOF SECTION FITS OVER ALL.

PLATE XVI—DESIGN FOR SMALL PORTABLE LOFT LOCATED ON PORCH.

ficial one. Bricks, too, and the moisture which they contain, directly absorb a large amount of heat on a hot, sunny day, and in so doing, keep the air within the loft comparatively cool."

We have given Dr. Barker's opinion upon the use of brick in pigeon house construction a prominent place because it appears his conclusions are well founded; although in the United States, wood is almost the universal material used in pigeon house construction.

There are several reasons why wood is chosen here. First of this, perhaps, is its universal cheapness as compared with other building materials, and then while few men would undertake to build themselves with brick, most men, office and artisans, the clerk, the plumber, tinsmith and electrician all apparently have the ability to undertake the building of a pigeon house with lumber. Hence, its general use for this purpose.

Again, there are men who claim the superiority of wood, as we shall see later in the description of the Jacobin house of Mr. Tregwin, for it is possible to make double walls with paper between which are almost air tight and impervious to heat and cold. The question of moisture in summer time is easily overcome by simply sprinkling a little water upon the floor and if you give the birds a bath inside, you will have plenty of moisture for they are sure to spill some on the floor.

Because of this general use of wood, all the houses illustrated in this book will be of that material and as our Canadian friends with their cold winters are able to build of wood, houses in which they hatch and rear champions, it would seem as though such material was ample for all needs.

Small Houses.

In our exposition of this subject, it is our plan to illustrate first some small portable houses and follow this with plans for squab houses, Racing Homer houses and fanciers' houses and lofts.

The small houses are placed first because we wish to show the beginner how easy it is to get a start in a small way, and from such a beginning it is possible to "grow big."

Your author also wishes here to introduce some ideas brought out by his experience in this matter. When he assumed the editorship of the American Pigeon Keeper, his residence was in a crowded part of the city where all around were three and four-story flat and apartment buildings, hence the opportunity to keep pigeons was almost out of the question. Yet, he felt that if he was to make the paper practical and therefore useful, he should have some pigeons under observation; hence he set about thinking of a way to make a start. There was a shed in the rear, but it was used by the landlord to store coal and other articles of use around the premises.

The first thought that came to us was to make an experiment and see in how small a place a pair of pigeons could be bred. Accordingly, a single pen, poultry size, display coop was secured from the Keipper Cooping Co., and a Coffee Box measuring about 18 by 24 by 30 inches. This latter was placed on end and a shelf put in it about 18 inches from the floor. Then one side of the wire display pen was removed by simply bending back some of the bent wires and this open side was attached to the open side of the box by means of wire staples. This was our first experimental pigeon house; and in it we placed a pair of Black Clean Leg Tumblers. From this pair in this coop setting on our back porch, we reared seven youngsters the first season. Of course, when the young grew, we could not keep them all in this small coop, so another display coop was obtained and they were transferred to it as they were weaned. One of these young cocks was shown at the Chicago show and it was as large and as vigorous as any male in the class, although it had never had a chance to fly in any one direction more than a couple of feet up to the time it was exhibited.

Along the line of small houses, our next step was to obtain from Mr. Keipper a four-section wire coop, pigeon size, the same as is used in every show, and by removing two of the wire partitions, we made of it two coops. In each end of this we placed a small box as a kind of protection for the hen pigeon when on eggs. In this coop, we bred one year two pair of Parlor Tumblers and had good success. In fact, it is our opinion that such a coop is about right for the breeding of this variety.

Our next step was to build the coop illustrated in Plate XVI, herewith.

This porch house was made of furring strips (1 by 2 inch strips) and sheathed over with five-eighths inch ceiling. It was constructed in the basement and carried up to the back porch and put together there, being fastened together with three screws at each end, front and back. The roof is not fastened and can be lifted off at pleasure, but it is held against the wind by the framing of furring strips and these also help to bind the house together.

While the plan as shown in this plate gives all the particulars necessary for a carpenter to construct such a small house, it may not be out of place to give some details to those who may not have tried to construct such a house before. The first thing to do is to construct the back as shown in Fig. G. The upright pieces are notched one inch to let the cross pieces in; and if a good job is desired, it is recommended that you buy some small angle iron braces and fasten them to the joints as shown in Fig. E. We did not do this, but used hay-bale wire instead; which, while it served the purpose of holding the side pieces tight against the cross pieces, it did not make quite as neat a job. This wire was wound around a nail driven into one piece and again around another nail in the other piece and then the nails driven home.

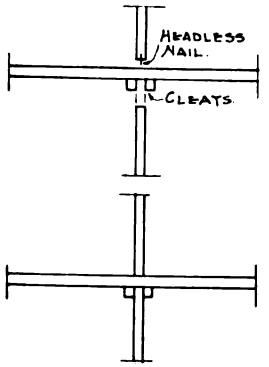
In placing the boards on the back, be careful not to crowd them and try to keep them square. To do this, you should mark each piece with a square and try to saw it as square as possible. We applied a square to the frames before nailing on these sheathing boards and "tacked" a cross piece on the inside to hold the frame in proper shape until the sheathing boards were all fastened. By this means we had a good, square job of this back section.

Next we made the front following on the same general plan, although it was a little higher and it will be noticed that both the front and back and ends, have the end boards projecting down, which make the feet of the house, which keep it off the floor and make it easier to get into the bottom section to clean it. In the front the door openings are simply left out and the number and location of the sheathing boards are shown.

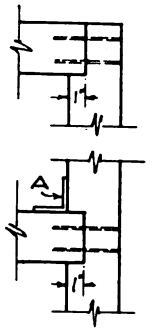
With the front and the back made, it becomes easy to place them in position, at the desired distance apart and tack on a couple of strips temporarily. This will give you the exact pitch of the room and assures you of getting the right shape to the end framing, which is shown in Fig. D.

When the ends were complete, they were "tacked" in place and you are now ready to frame your roof, the details of which are shown in Figs. B and C. It will take a little care in the fastening of those roofing pieces as you are working on a bevel, but just a little care will bring you out all O. K.

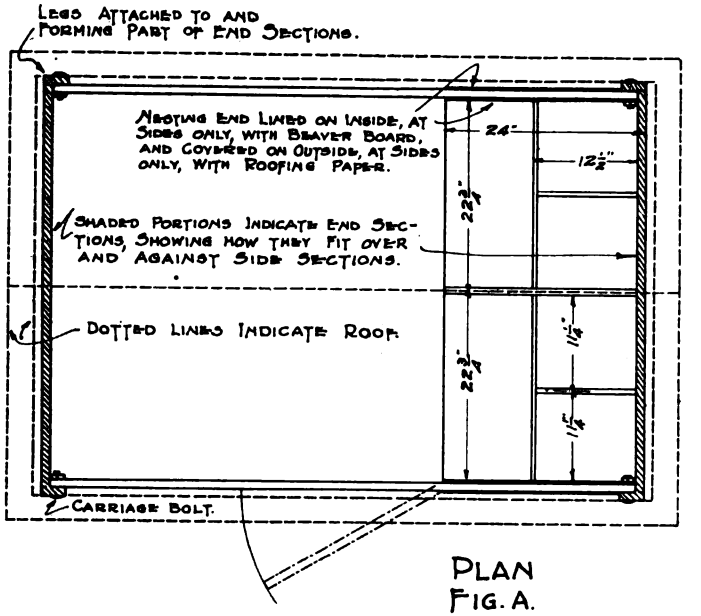
It will be noticed that there are three floors, or three levels. Just why that number was chosen, is difficult to say, but such a house would accommodate all the pigeons we had at that time and perhaps one of the determining factors was that all the buildings around us were of the three-flat variety.



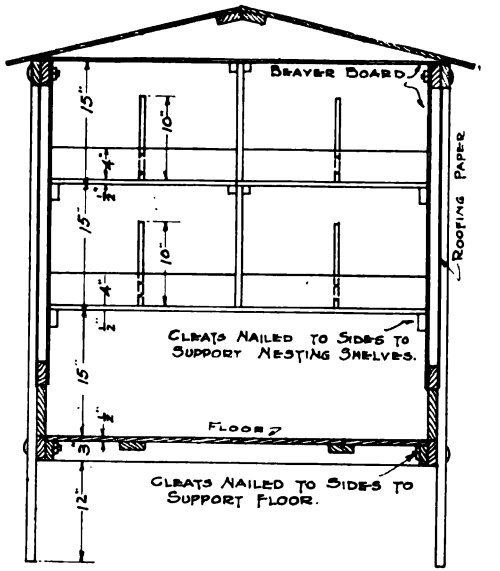
ENLARGED DETAIL OF NESTING PARTITION.
FIG. F.



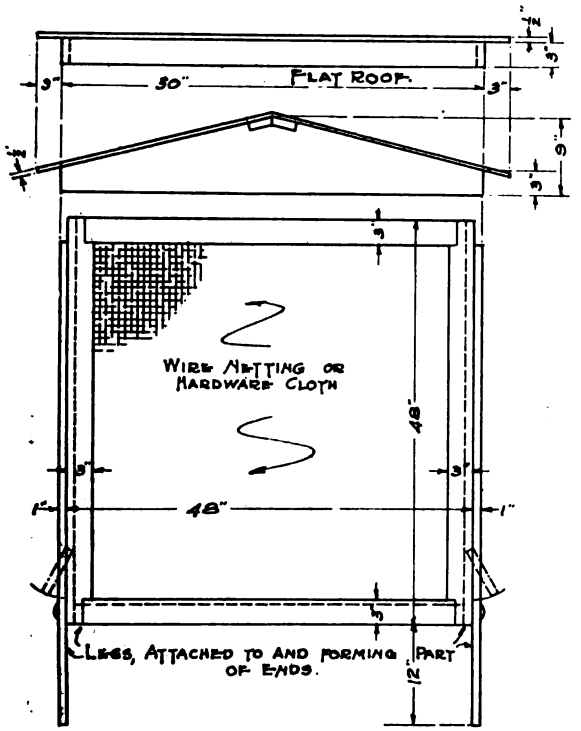
ENLARGED DETAIL OF JOINTS



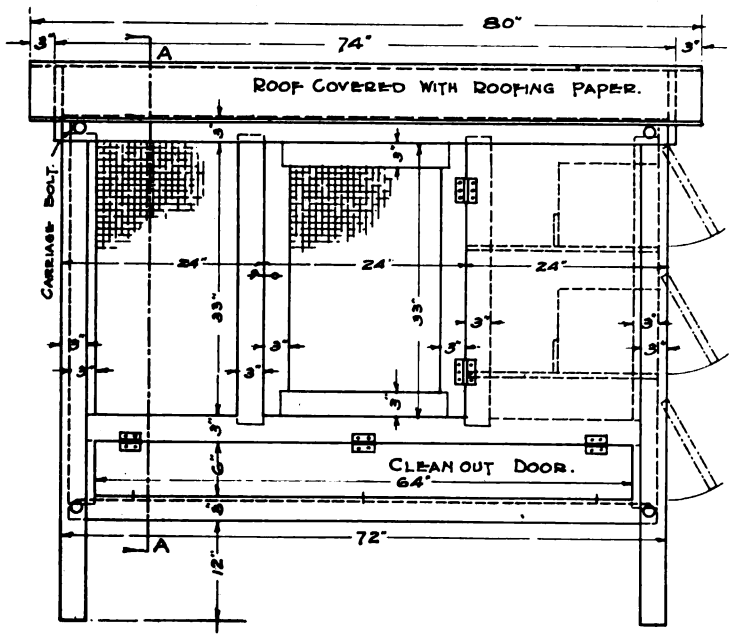
PLAN
FIG. A.



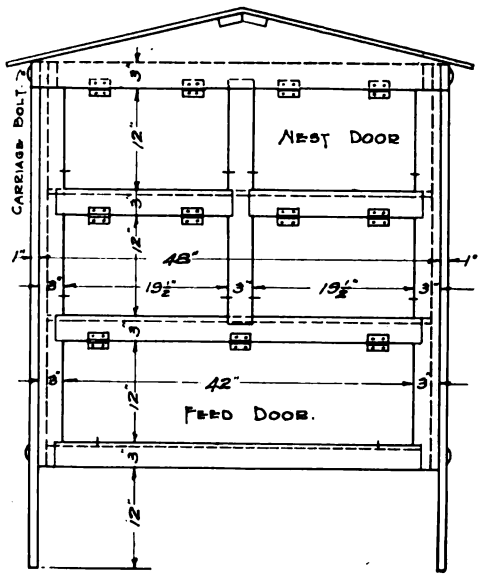
SECTION A-A.
FIG. E.



FRONT VIEW
FIG. B.

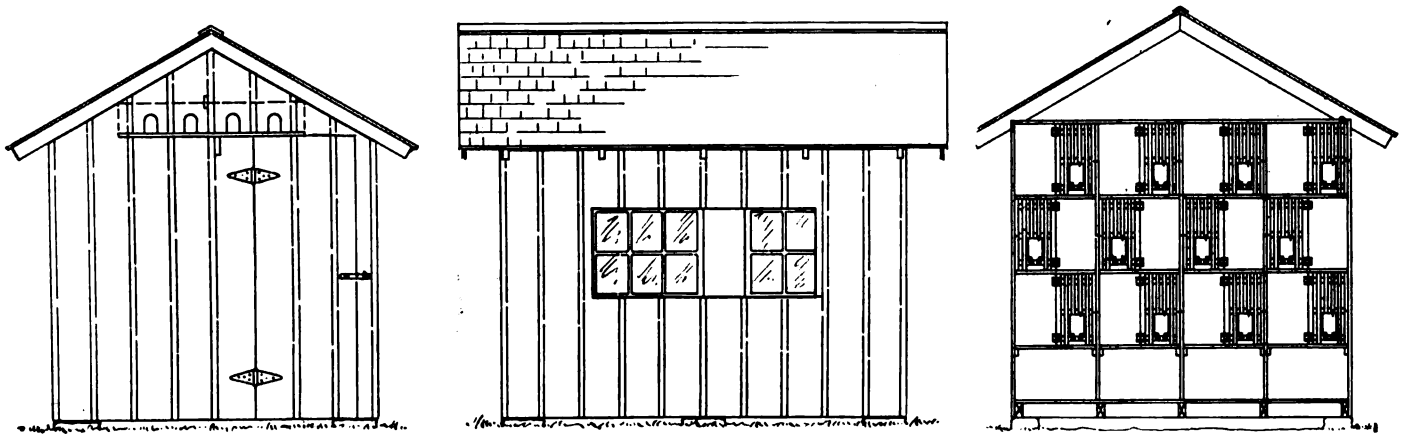


SIDE VIEW
FIG. C.



REAR VIEW
FIG. D.

PLATE XVII—ANOTHER DESIGN FOR SMALL PORTABLE LOFT, SUITABLE FOR LOCATION ON LAWN.



PLAN OF THE EDITOR'S FIRST PIGEON HOUSE.

The front doors are made of the 1 by 2 strips and hung from the top. To make a good job, it will be necessary to fit and fasten to the upper front a small strip to which the hinges can be screwed and on the lower parts this strip serves as jam against which the lower part of the door can swing.

The floors are made of ordinary seven-eighths flooring and are simply cut to the right length and laid in. The plan, however, shows how they can be fastened to a frame if desired. Of course the end pieces will have to be cut to fit in the corners. The house was painted inside and out with two coats of out-door paint.

Now, as to the operation of this cabinet. In summer the center floor pieces of the two upper floors are removed except three pieces at each end and in this house we have bred six pairs of pigeons without any trouble. One in each end on each floor. In winter, the floors are all replaced and we have housed over forty birds in such a coop.

Another Small House.

While we were planning this house illustrated and described above, we had some talk with Mr. Wernle, a draughtsman friend of ours, and he submitted the plan shown in Plate XVII. The main reason we did not adopt his plan for our purpose was because it was a little larger and our porch would not accommodate it, so we have had him make a few changes which would make this house, in our estimation, very suitable for location on a lawn or an open shed, and in such a location it would make an admirable "loft" for Parlor Tumblers, Fantails, Jacobins, Pigmy Pouters, or other varieties where tameness or seclusion from other pigeons was desired. For in-doors a flat roof is planned and for outside a two-pitch roof.

The framing and general construction is similar to that shown in Plate XIV. If this house is to be placed in an open position where cats, rats or mice could get at it, we would recommend using one-half-inch hardware netting for the covering of the open parts, although it does not make quite as nice a covering as one-inch woven wire, as the hardware netting is difficult to look through, and the pigeons cannot be watched as well as through woven wire. For outdoor protection, it is also recommended that the nesting portion be lined with beaver board to afford extra protection against heat and cold. This board is easily cut to fit and is quite economical in pigeon house construction.

Our First Pigeon House.

The accompanying illustrations give the reader some idea of your editor's first pigeon house, fixed up for him by his father in an old shed situated at the end of the lot, when the writer was a lad of about nine years old. In this house were several varieties and it will thus be seen that our early impressions showed the advantages of the individual breeding and nest place for each pair.

The house was square and to one side was a flying pen in which the pigeons were allowed to exercise at all times. Over the entrance door there were several openings to let the birds out for a fly and as some of the birds were performing Tumblers this was very essential. When these birds were let out the Pouters, Carriers and Fantails were chased into the aviary and the window closed. These exit holes were opened by lowering a board onto two brackets and this board could be raised to close the holes by pulling a string.

The interior view of one end of the loft shows how it was divided into small pens which made nesting places. There were twelve of them for a dozen pairs of birds and it was many an hour we spent inside this house on a rainy day in spring watching the mating and nesting of the various pairs. The front of each pen was one-half boards and the other half was made of lath and this half was hinged to make a door. In this lath part was a small opening for the birds to enter the compartment and to get out when it was opened. These nesting places were 2x2x2 feet. It is apparent now that it was unnecessary to make them so high, as 18 inches is high enough to permit of a shelf upon which to place a nesting bowl.

These facts will reveal to some of my readers for the first time that your editor had pigeons at such an early age and that his father was a pigeon fancier before him. But such are the facts and it will also appear that this plan was pretty well up-to-date when it is remembered that the only book we had as a guide was Tegetmeier's "Pigeon Keeping," which did not illustrate any such house as this. Fulton's book came later and it was, we believe, the first to illustrate compartments for breeding pairs.

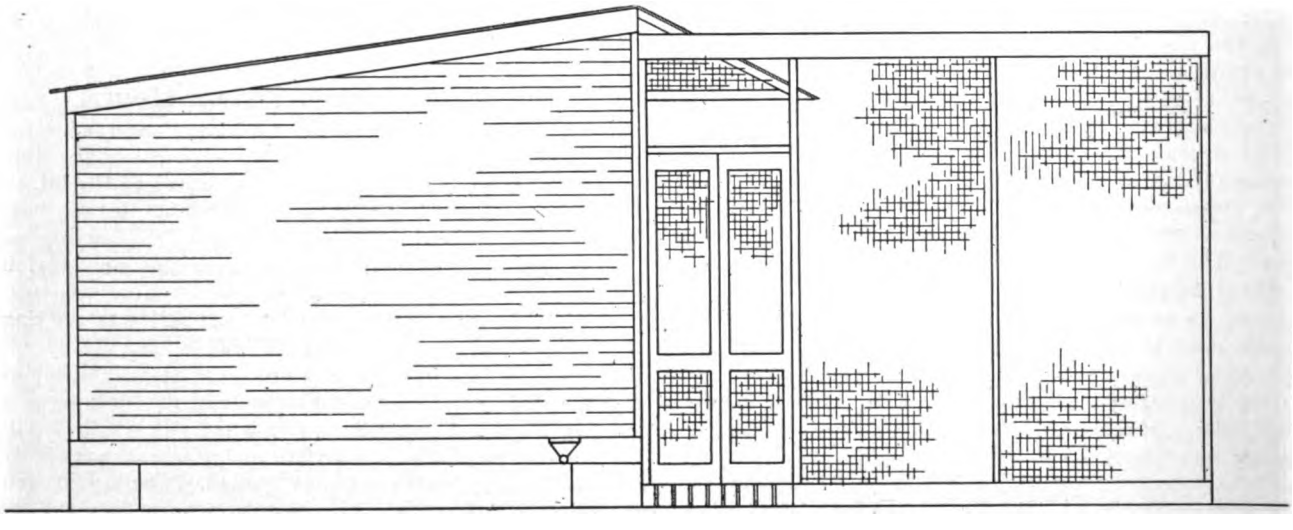
Chapter III

Squab Houses

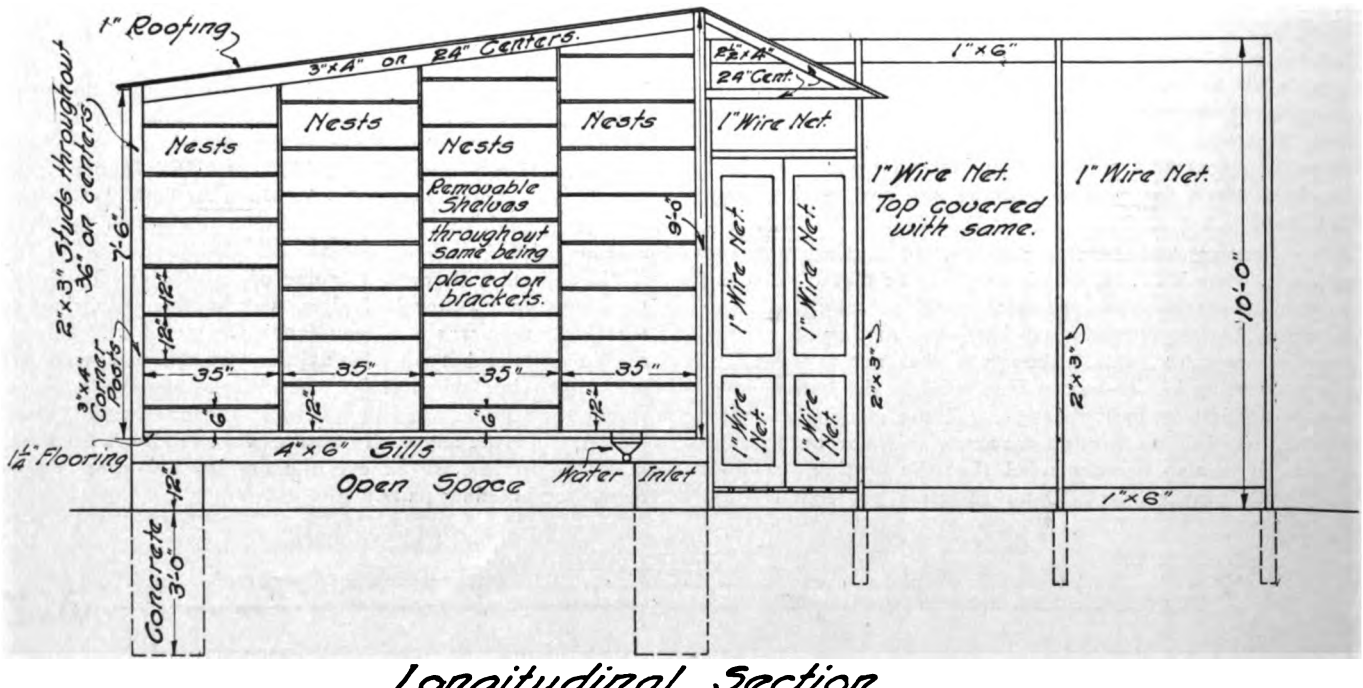
A Description of Requirements—Cushman's House—Eggleston's Style—And Others

AS THE United States was the first country where squabs were raised in a commercial way, it was but natural that there has been some evolution in squab house construction. As the first squab raisers were poultry men, it naturally follows that the first squab houses were fixed-over poultry houses and, literally any-old-thing. This, in a certain degree, accounts for the many failures which our squab history records, for without proper facilities it is impossible to raise pigeons in large numbers in small quarters but that it is possible to raise them successfully in small quarters, we have already shown.

The first houses, then, followed the general poultry idea of the long house as was common among poultrymen twenty years ago, and had a hall passage-way in the rear, or on the north side. In our visits to such squab plants, we have been struck by the rushing out and off the nests of the birds as we passed through, which, of itself, must be quite a handicap in pigeon production. To meet these demands of the require-



Side Elevation
Scale ¼" = 1'-0"



Longitudinal Section.
Scale ¼" = 1'-0"

PLATE XVIII—ELEVATION AND PLAN OF THE CUSHMAN STANDARD SQUAB HOUSE. See Text and Plate XIX.

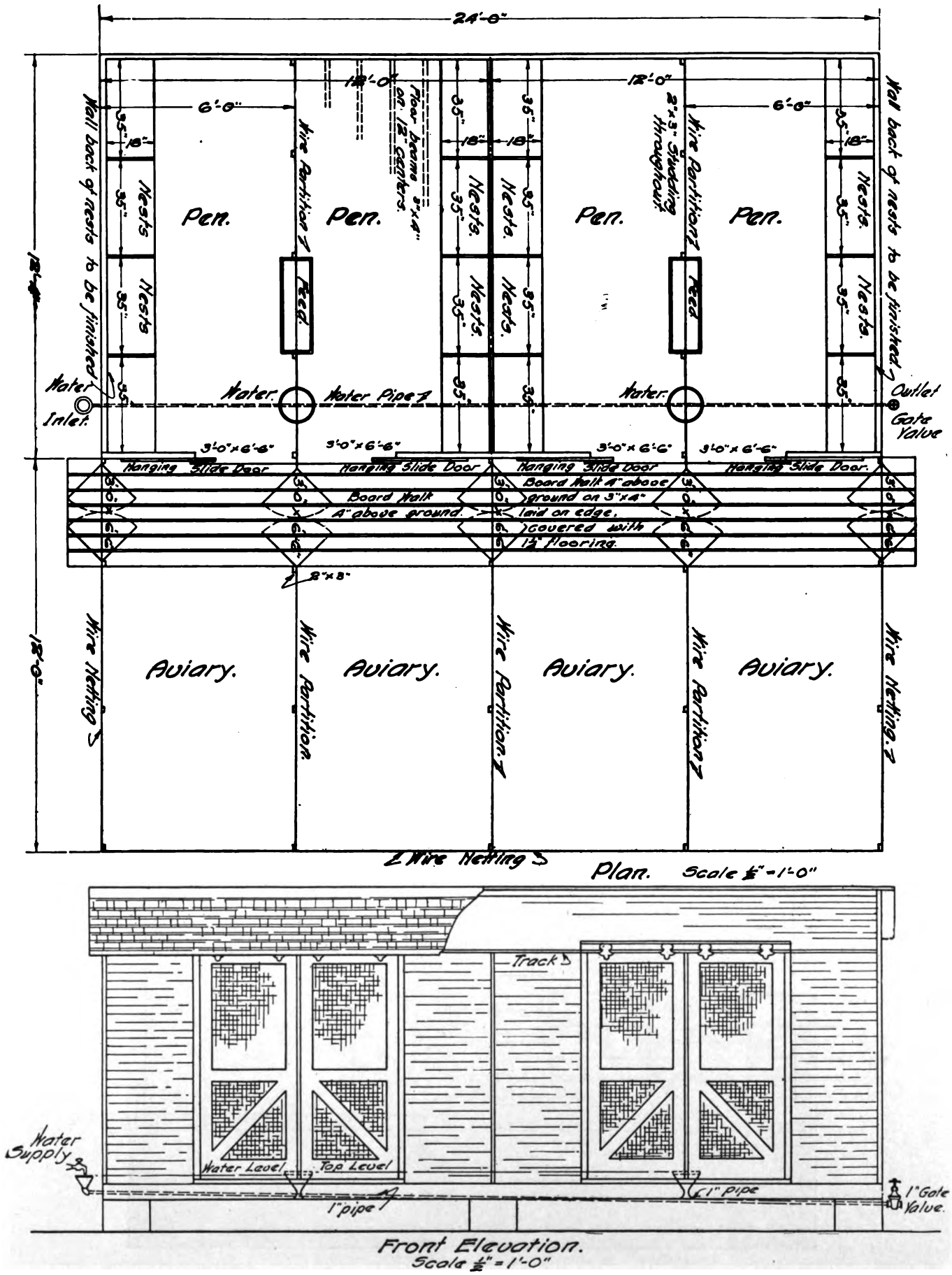


PLATE XIX—GROUND PLAN AND FRONT ELEVATION OF THE CUSHMAN STANDARD SQUAB HOUSE.

ments of success, practical pigeon men have devised houses and it is our privilege to illustrate herewith two of such designs.

The Cushman Standard House.

This house shown in Plates XVIII and XIX is designed for a medium-sized squab producing bird. If you are going to use Runts, it should be slightly larger in every dimension, especially in the nesting places; or perhaps, it would be just as well to keep the main building of the same size and to build therein fewer nests. For Homer-squab purposes it could be slightly smaller, or an additional nest might be placed on each row.

These houses are all planned to face the south so as to take advantage of the sun as much as possible, especially in winter time and there are particular advantages in the so-called shed-roof style of house. This style insures a steady flow of air towards the front as warm air always seeks the highest point, which will give you ventilation; and this could be increased in summer by simply making a door opening in the rear. But such opening should be so constructed as to make it possible to close it tightly in the winter as the front ventilation will be found to be ample at that season of the year. Of course, in the southern states where water does not freeze in winter, less protection is necessary and in such places it would be satisfactory to leave the entire front open.

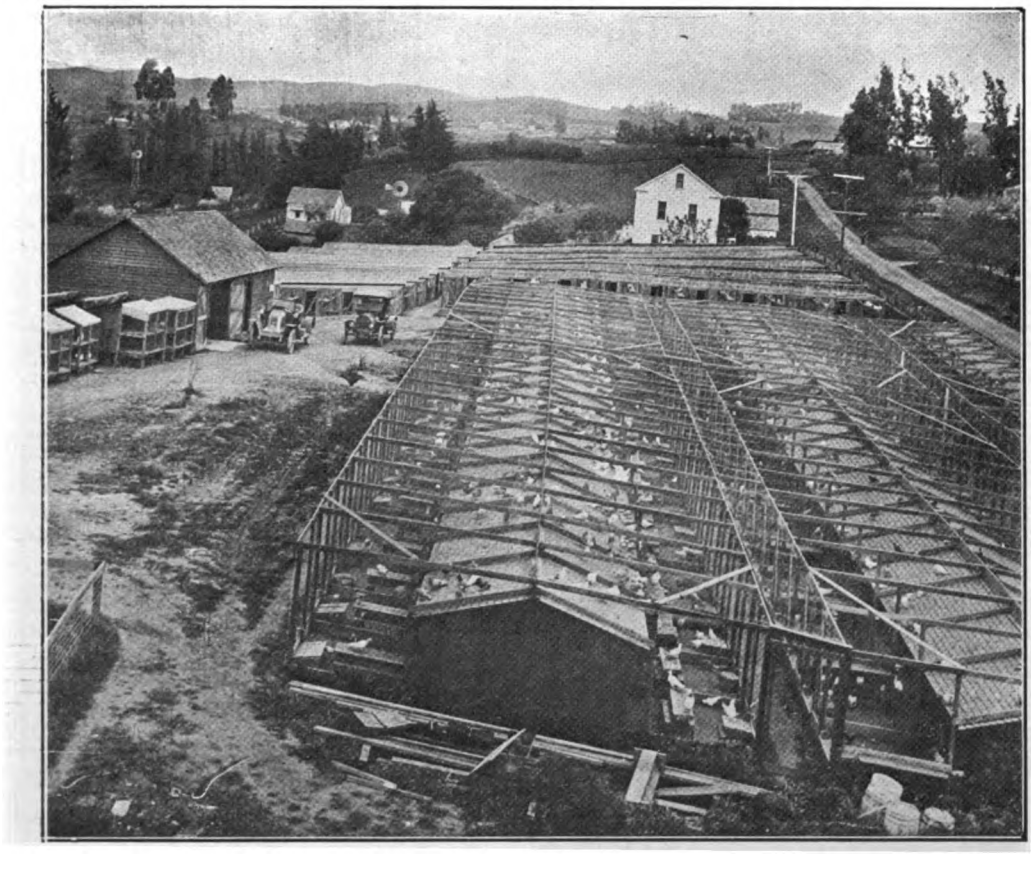
In this plan, it is intended to show only a section of what is intended to be a continuous house for as many feet as you may desire. The general dimensions will be found to be correct. Your carpenter may suggest a higher roof, but if you follow such suggestion, you will add to your trouble in catching birds, which is unnecessary. Many copies of these plans have been sold at One Dollar each and such houses have been built in many places, so this design is therefore worthy of the most careful consideration.

The section shown is planned to cover a ground area of 24 feet square. This unit has two principal divisions, the one being squab house proper which is 12 by 24 feet and the other, the flying pen or aviary which is 12 by 24 feet. The squab house, if divided in the center by a double board partition, making two sections 12 by 12 feet; and these in turn are again divided by a wire partition, making two pens 6 by 12 feet—or four breeding pens in all. In each of these pens it is planned to place from 30 to 40 pairs of squab breeders, and with 30 pairs as a minimum number, this house as planned will care for 120 pairs.

The entrance to this squab house is through two sets of double doors 6½ feet high, 6 feet wide, placed in the center of each section, and these doors meet at the wire-pen partitions, so that the entrance to each pen is three feet wide and 6½ feet high. These doors face the south and no other windows, doorways or opening of any kind whatever are necessary in this squab house.

The nests are located against the board partitions and face the wire partitions. For Homers, the nesting boxes should be 10 by 12 inches and for Runts 18 by 18 inches. For other intermediate breeds, use intermediate sizes.

In locating a squab house, it will be found to be advantageous to have it on posts about 18 inches above the surrounding ground level. This is to prevent rats from harboring underneath and also to prevent ground moisture from coming up through the floor. Of course, in cold climates, it



A BIRD'S-EYE-VIEW OF A LARGE SQUAB PLANT.

will be found to be necessary to have double-boarded floors which will prevent draughts from below.

The details for the flying pen are shown in the plate. There are no particular roosts necessary in the flying pen, other than the six-inch board running along the sides as shown. These are located on the south end of the pen, so the birds will have to fly the whole distance of the pen should they wish to get from the house proper to an outside roosting place. It will be noticed that there are several of them, the first is located 18 inches below the upper covering of the pen, and each succeeding one 18 inches lower until within three feet of the ground. The entrance to this house is through the fly pen or aviary and a walk along the front of the building enables you to pass through quickly without disturbing the birds on the nests and at the same time you are able to see all the birds and notice if any of them are "moping" or not. The ability of the keeper to judge the bird by its "moping" is one of the fine secrets of success in pigeon keeping.

It is planned to set the water for the bath in the center of the fly pen or a slight distance from the passage walk and it will add to the speed and save the time of the attendant if a water tap of running water is located near by. Of course, if your earth is clayey and heavy, you will also have to provide some kind of drainage from such a place, but these are details which the average man can work out for himself later as occasion demands.

The doors on the front of the house are planned to be hung on sliding rollers and should be so hung as to roll shut of their own accord, unless hooked open for some purpose. The doors to the aviary are planned to be hung with double swinging hinges so all the attendant has to do to gain entrance is to "push" and the doors will swing closed behind him. This little plan will add materially to the speed with which a man can care for a big flock of pigeons and with such contrivances handy, it is computed that one man can attend to two thousand breeding pairs; doing all the work of feeding. Notice the clever arrangement for the water supply. It consists of some one-inch iron pipe running along under the floor of the house with a one-inch extension upwards at the partition between each two rooms and the upward iron pipe has a funnel soldered onto it, or a similar shaped galvanized can. At the left of the plan, there will be noticed an inlet with a funnel attached, and at the other extremity there is an outlet. The idea is to fill this arrangement with water periodically and before filling to let the water drain off at the outlet end. This can be done as you pass through the house to feed and the water system refilled as you return from feeding. Of course, additional help will be necessary on squab-killing day to dress the squabs and get them ready for market.

The following is the bill of material for the section of the house as shown in Plate XVIII and XIX:

Sills	4"x6" 12 feet long	6 pieces
Plates	3"x4" 12 feet long	6 "
Corner posts	3"x4" 8 feet long	3 "
Corner posts	3"x4" 9 feet long	3 "
Floor beams	3"x4" 12 feet long	25 "
Studding	2"x3" 8 feet long	6 "
Studding	2"x3" 9 feet long	13 "
Rafters	3"x4" 12 feet long	13 "
Flooring	325 square feet	
Roofing	500 square feet	
Overhang shed	3"x4" 5 feet long	13 "
Overhang shed	3"x4" 4 feet long	13 "
Weather boards	600 square feet	
Runway studs	2"x3" 10 feet long	24 "
Runway braces	1"x6" 168 square feet	
Runway doors	10—18"x6 feet long, 6 inches, panels out	
Runway walk	100 square feet—flooring 3"x4"—3 feet long	14 "
Sliding doors	1⅛"x6" 6 feet 6 inches long	8 "
Sliding doors	1¼"x6" 2 feet long	12 "
Sliding doors	1⅛"x6" 3 feet 6 inches long	4 "
Sheathing rear nests	500 square feet	
Part studding	2"x3" 8 feet long	2 "
Part studding	2"x3" 8 feet 6 inches long	4 "
Part studding	2"x3" 9 feet long	4 "

How to Build a Takedown Squab House.

By John S. McCreight.

AS QUITE a few will want to raise pigeons who are living on rented property and do not care to build a house and fly for the landlord, let them build a "takedown" house and fly, and then they can move it whenever they get ready. In building this house, I would advise making it eight feet long, six feet wide, seven feet high in front and six feet high in the back; this will allow pitch enough to the roof to make the water run off rapidly.

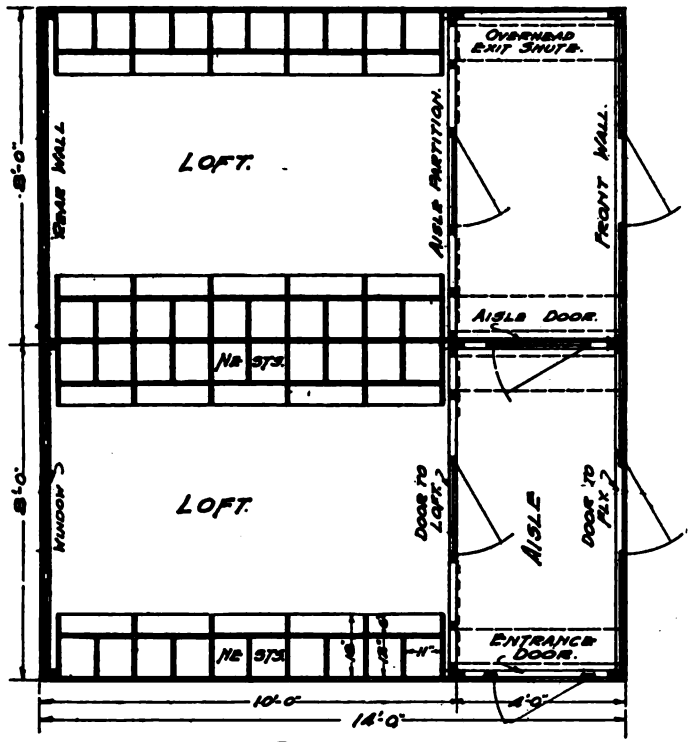
Floor: Get you two pieces of 2 by 4 rough scantling eight feet long. Use eight or ten inches rough plank one inch thick (this width being some cheaper than the twelve-inch wide plank), and cut enough six-foot lengths to cover the 2 by 4 scantlings. Nail them to the two-inch side of the 2 by 4 scantling, and make the planks fit up close so as to leave no cracks; this will be the floor of your house.

Sides: The sides will be seven feet high in front and six feet high in the back. Cut the front 2 by 4 scantlings seven feet long and the back one six feet long. From the ground end measure off two feet on each scantling (or post, as they will be called), and cut another piece of 2 by 4 five feet and eight inches long. Then nail this piece to the flat side of the posts, letting the bottom of it come even with the mark you made on the posts. Then measure a piece of 2 by 4 to fit in at the top. This piece you will have to cut on an angle, so you want to be careful in measuring, making the top of the piece you are measuring come even with the top of both back and front posts. This will be your frame for the side. Before nailing on the plank, measure and see if the frame is six feet wide at both the top and bottom, as sometimes a fellow will measure wrong or saw to the wrong mark. Now measure the plank even with the front of the posts and let it come to the top of the post also. Now run your pencil under the 2 by 4 at the bottom and on top of the 2 by 4 at the top. The top mark will be an angle but the bottom mark should be square. Nail the plank on so as to fill up the space as closely as you can. Both sides are built on the same principle, except that you will want to be careful and make both your high posts come in front; in other words, make a right and left side. You can make the frames for both sides before nailing them up, but when you come to nailing on the planks is the time you want to watch out which side of the frame you are nailing the planks on.

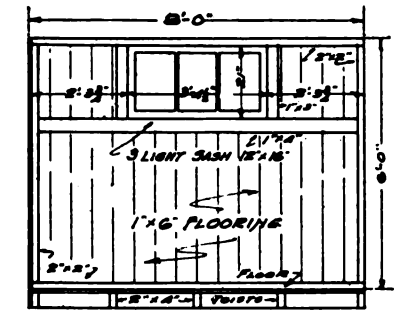
Back: Get two pieces of 2 by 4 scantling seven feet and four inches long. Then cut plank four feet long, enough to cover these scantlings, nail them to the flat or four-inch side of the 2 by 4.

Front: Use only a frame. Get two pieces 2 by 4 and cut them seven feet and four inches long and two pieces five feet long. Nail these together and you will have a frame. Measure off two feet from one side for a door and nail in another piece of 2 by 4. To act as a brace for this frame cut two pieces of 1 by 6 plank seven feet and four inches long and nail one even with the bottom and the other one even with the top. Would advise covering this front with three-quarter-inch wire, as it will keep out the rats. Now you can build a door to fit in the space, and hang it to either side you wish.

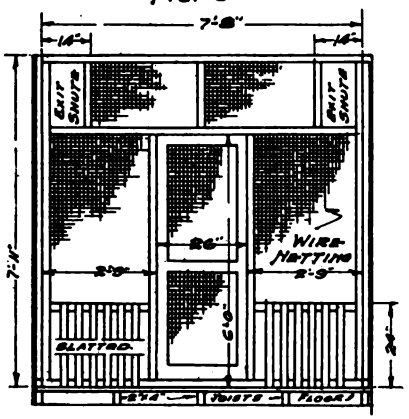
To put together: Measure the back of your house, and then measure the back post and nail on a cleat (a piece of 2 by 4), being careful to see that when the back is put in, the top of the back will be exactly even with the top of the back post. Measure the front the same way and nail on the cleats. You will need a few of the three-inch hook and eye latches that sell at the hardware stores at a penny each. Screw the hook part into the posts and the eye piece in the back and front



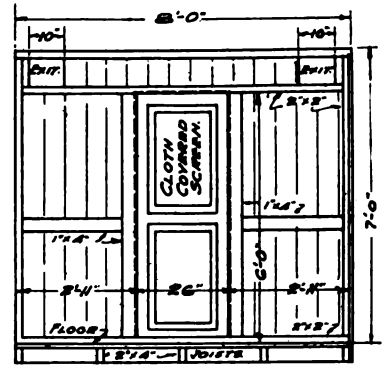
PLAN
FIG A.



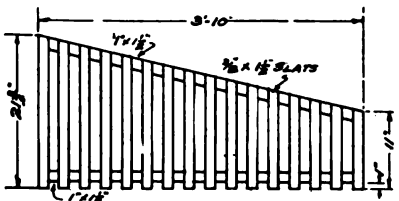
DETAIL OF REAR WALL (INSIDE)
FIG. C



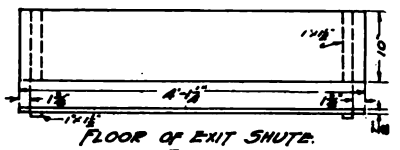
DETAIL OF AISLE PARTITION.
FIG. E.



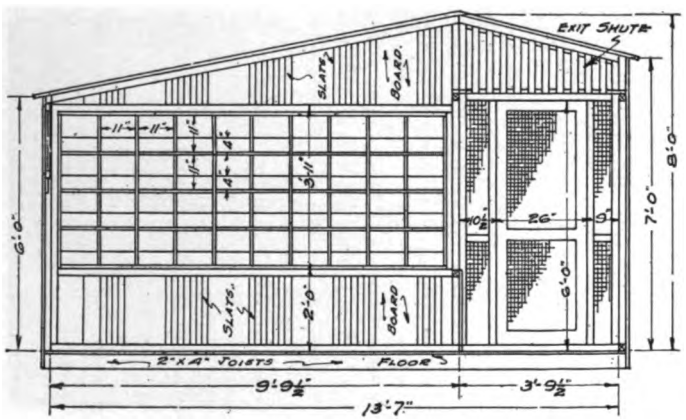
DETAIL OF FRONT WALL (INSIDE).
FIG. D.



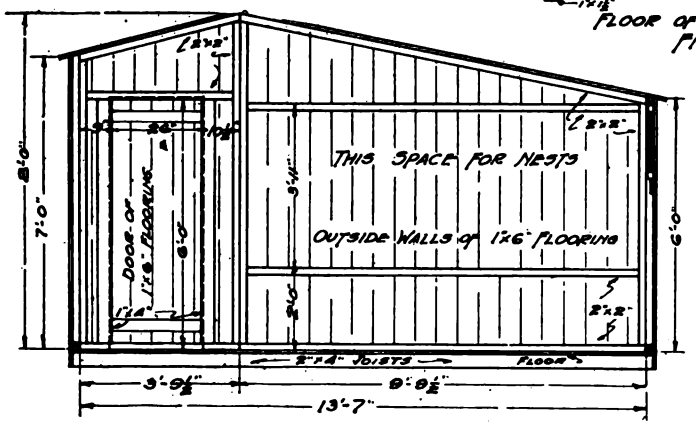
SIDE OF EXIT SHUTE.
FIG. G.



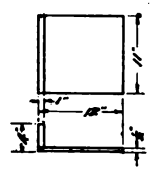
FLOOR OF EXIT SHUTE.
FIG. H.



DETAIL OF LOFT PARTITION
FIG. F.



DETAIL OF SIDE WALL.
FIG. B.



NEST BOTTOM.
FIG. I.

PLATE XX—PLAN OF THE EGGLESTON HOUSE SECTION.

Screw them in so the house will fit close, then turn the eye a little with your hammer, and it will lock the house and keep it perfectly solid.

Top: Get two pieces 2 by 4 scantling seven feet and four inches long. Measure your plank so as to allow the top to project over at both front and back one foot, which will make them about eight feet long. Lay one of these planks across the top and measure where the 2 by 4 will be, letting it fit tight against the 2 by 4 at the top of the back and front. Nail the plank to the two-inch side of the 2 by 4. Cover it with a tar paper or rubberoid covering. Use the hook and eye latches to lock on the top with same as you did the house.

For the fly: Get two pieces 1 by 6 plank eight feet long and two pieces seven feet long. Nail them together and you will have a frame eight feet long and seven feet high. Make three of these frames, two for the sides and one for the end. Wherever you want your gate or door to get into the fly, either in the end or the side, leave a two-foot space. If you want the gate in the end you will measure off two feet from the inside of the six-inch plank and nail another piece of 1 by 6 plank. While you have the frames on the ground tack on your wire. Use the hook and eye latches to hold the fly together, and you will find your house and fly as steady as if they were built and nailed together. The fly will be eight feet long, eight feet wide and seven feet high.

For the top of the fly: Build a frame eight feet square, and tack on the wire. It will rest right on top of the sides and end, and you will lock it on with hook and eye latches.

If you have had no experience in building, get some paper or cardboard and cut it out and put it together so you will not run the risk of ruining your lumber. If you make a house from the paper or cardboard, make it inches instead of feet; that is, eight inches long, six inches wide and seven inches high in front and six inches high in the back.

The open space under the floor of your house will be a fine place for the birds, and you close it up by running a piece of wire all around. Nail this wire on with shingle nails, drive the nails about half way in and then bend them over the wire; they will hold as good as the regular wire staples, and should you want to move the house, there will be no trouble in getting the wire off. Another cheap house is made from an old piano box, set on legs two feet above the ground, and building a "takedown" fly.—"Squab Magazine."

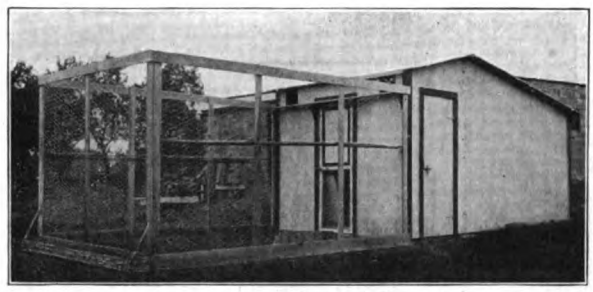
The Eggleston House.

Another style of house is named the Eggleston and it was originated about 1916. It is one of the aisle-in-front styles as shown in Plate XX and in the accompanying illustration of one of these houses. It has been the writer's privilege to visit several of these houses and from actual observation he can testify to their practicability for squab breeding purposes. Many of these houses have been built in a portable manner and sold by breeders in various sections.

This house differs from the Cushman house, in that the front passage-way is inclosed within the building proper. Of course this adds to the expense of construction materially; although in cold climates it will make the pigeon keeping more pleasant as you will be working more within doors.

There is really not much detail to this construction other than indicating the general dimensions as shown in the plate. The framing can be 2 by 2 inch; although 2 by 4 will give a more substantial building. The outside covering is planned to be of drop siding, or matched flooring. It would add materially to the comfort of the pigeons in such a building in cold climates, if the whole structure was covered over with roofing paper.

The nests are placed against the partition walls the same as in the Cushman house and this arrangement of an aisle-in-front makes it necessary to provide an overhead passageway



A VIEW OF A COMPLETED EGGLESTON LOFT.

for the birds to get out into the fly-pen, the details of which are shown. Of course, the front passageway makes the breeding pens rather darker, but the rear window overcomes some of this, and we might here say that a pigeon does not need much light to conduct its incubating and feeding operations.

The erection of a squab house as shown in the accompanying plans is not a difficult task. The main thing is to be sure your foundation is suitable and substantial. To accomplish this the corner posts should be sunk below the front level and we are of the opinion that nothing better could be obtained than posts made of cement. These could be easily made by making a box about four feet long of two-inch planking and pouring it full of a concrete mixture. As the same form could be used for any number of posts it would not be expensive and such a foundation would last a life time.

It should also be planned to have the house at least eighteen inches above the surrounding ground level. This is to prevent rats from gaining a headway, for they are especially fond of young squabs, especially the female rat just before she has young. They will pass all other kinds of bait to get at a live pigeon; at least this is the conclusion which we have gained from the many reports of rat depredations that have come to our attention. By having the pigeon loft open underneath, the rats cannot get a chance to gnaw at the wood, because when the surrroundings are open, he or she is always looking for visitors or intruders, as the rat is a very shy animal, and it will seldom gnaw wood in an open place.

Of course, after the foundation is laid, the next thing is to raise up the outside frame work and board up some of the sides to make it more firm and substantial, after which you can put on the roofing boards. Then you can finish the doors and windows and inside fittings at your leisure.

While these plans do not indicate more than a single thickness of wall lumber, it is our impression that more satisfactory results will be obtained in squab raising, in Chicago latitude, if the walls are double thick, that is a sheathing of boards on the inside of the studding as well as the outside covering, and it would be better still if common building paper was tacked to the studding before the inside sheathing boards are nailed on. This would make the wall non-conducting of both heat and cold.

The rear window of the Eggleston house was a great improvement, as before it was introduced, the house was rather dark and it is our observation that pigeons in a semi-dusk room are apt to mistake their mates and this sometimes causes trouble; although it is well known that pigeons can incubate their eggs and feed their young in a very dark corner very satisfactorily; but pigeons do need light to see to eat and light is also a destroyer of some forms of vermin which infest pigeon houses.

It will help the light question, if the interior of the house is whitewashed twice a year regularly. This will also help the production of young squabs as they seem to thrive better when the conditions are sanitary. It is really surprising what difference there is among birds after the place is cleaned out and the effuluvia and emanations are removed.

Making a Squab Breeding House

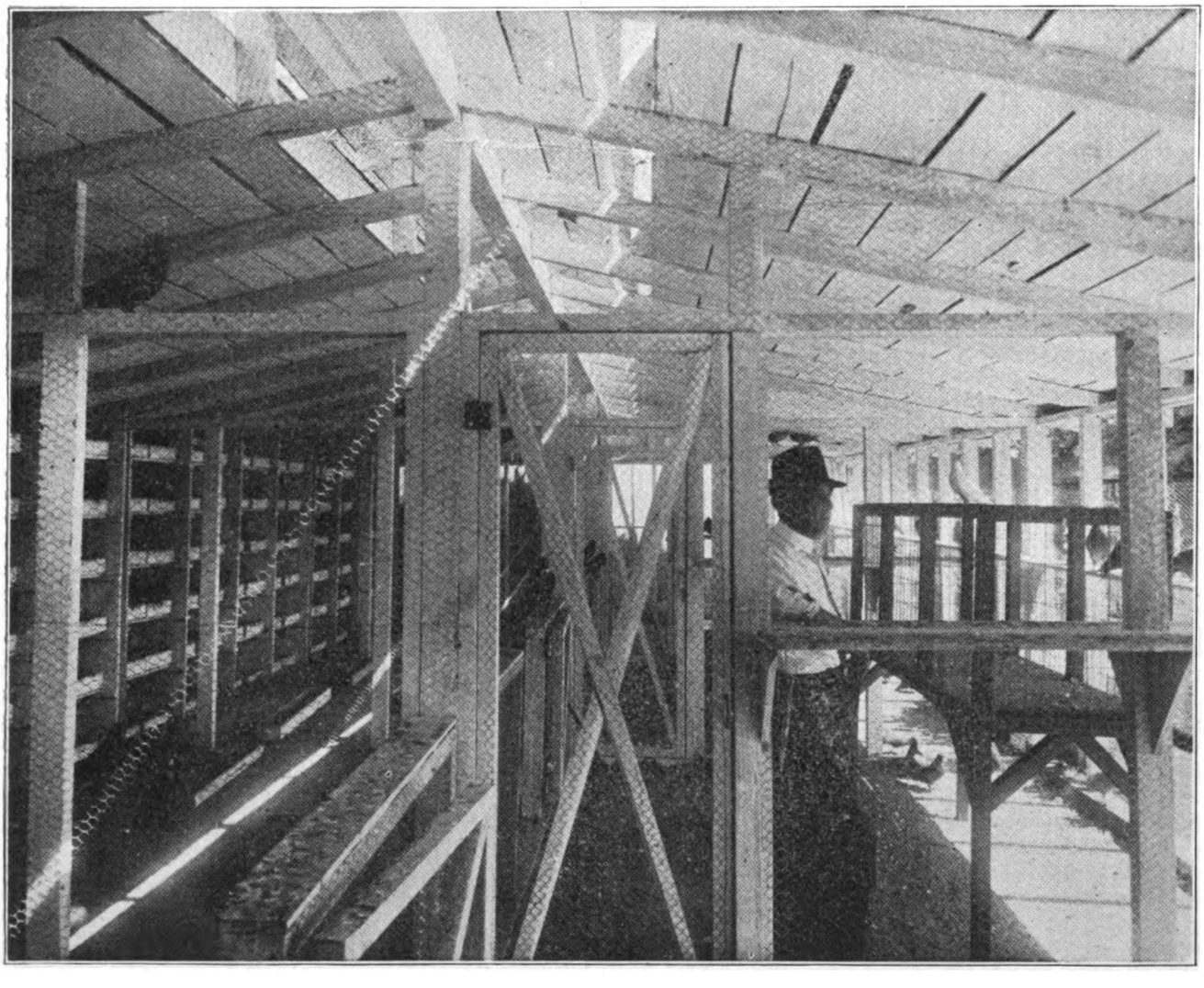
By F. F. Aschbacher.

THE following article is intended to enlighten those who contemplate the erection of an entirely new building, or loft, and if closely followed will have the desired result, that of having an up-to-date pigeon loft.

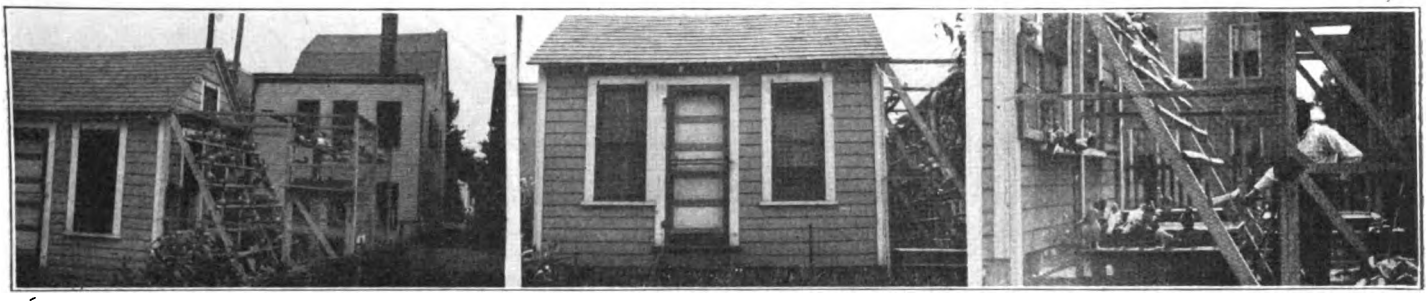
First, select your site, making sure that the drainage is good, better if you can locate your loft where there is a gradual slope toward the south. Be sure that you arrange your foundation so that the flying-pens and windows will be on the south side, thus affording sunlight and the direct rays of the sun for your birds, as well as protecting them from the north or northwest winds of winter. If a sandy, gravelly soil can be secured so much the better.

Second, the foundation. Now before going any further, I wish to say that the following is a description of a unit, of a building that can be made any desired length. Set three cedar posts or if more easily secured, oak posts will be as good, 4x4 by four and one-half feet long, eight feet apart, in an exactly straight line; then three more, just eight feet to one side of these. This will support a building eight feet wide and sixteen feet long. The posts should be allowed to remain two feet above the ground, thus raising your building as a prevention against rats and mice, and insuring an always dry floor. Now take two pieces of 2x4 scantling, sixteen long, hemlock is as good as any and will not cost as much as pine, lay these on edge and take the same material and place a cross piece every four feet, nailing them with spikes from the outside of the long pieces. This will make a good, solid foundation for the floor. For the studding use pieces ripped from a six-inch plank, two inches thick.

I take a sixteen-foot plank, any width, and have the planing mill rip them into pieces three inches wide; thus by taking these and sawing them, one eight foot and six inches long, the other seven feet and six inches, you will save lumber and make the pitch of your roof one foot in eight. Use 2x4 scantling for the roof supports, nailing these to the studding before raising them; then toe-nail the studding to the top of the outside piece of your foundation. Be sure to place one every four feet, brace them temporarily, which may be removed after the siding is nailed on. For the sides, I cover it first with tar paper, which not only insures plenty of warmth, but is a preventive against insects of all kinds. Commence at the bottom and run your paper lengthwise, taking it at the top: then put on your siding, which will hold the paper, where you want it. For siding I would recommend the use of barn siding, which is much better than shiplap and costs no more. In placing the tar paper, be sure to make the lap on the inside, so as to prevent dust and feathers from getting between paper and wall. For the roof, I use common sheathing first, then cover this with rubberoid roofing, but any kind will do. But will say that either of the patent roofings are better than shingles, on account of not holding



THE INTERIOR OF GEORGIA CARNEAUX BREEDING LOFT.
NOTE THE ABUNDANCE OF LIGHT AND GENERAL ARRANGEMENT, WHICH IS VERY SUITABLE FOR SUCH CLIMATE.



A SMALL SQUAB LOFT LOCATED IN A NORTHERN STATE, SHOWING HOW A MAN WITH A GOOD-SIZED BACK YARD CAN ADD TO HIS INCOME.

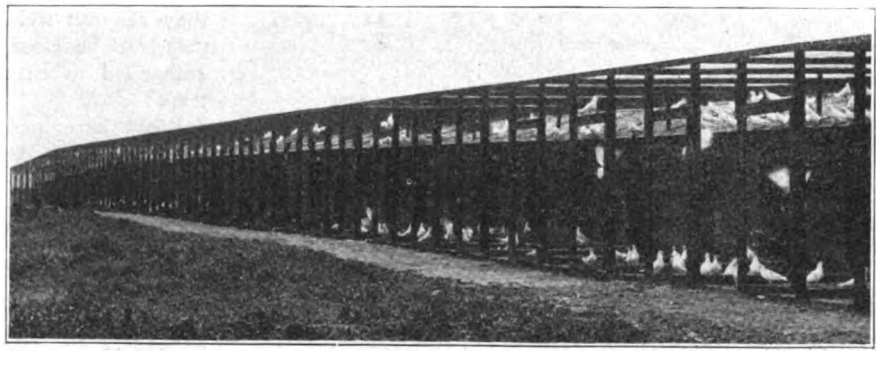
dampness. In making your foundation, it is well to remember not to make it wider than eight feet, as then three strips of the patent roofing will just cover it and again save waste, which must be considered to keep down the expense. For the floor I would recommend a double one, but use your own pleasure. I use the same material as for the roof for the first layer, and then I place paper over all. A good cheap paper can be had by going to your local billposter or opera house manager, who will give your renewal paper for the taking usually, and it is much tougher than newspaper stock. If this paper is used, lay it about four thicknesses, then put on your top floor, which should be matched lumber, the same as the siding. This will make your floor level, and make the cleaning the easier.

Now go along the inside and, using roofing nails and caps, tack all the laps of the paper, to assist in keeping it in place. Now you will have to saw out your windows unless you prefer to do this before hand, as you are putting on the siding. Two will be sufficient. Make each of them to fit a sash with six glass 8x10. Make your windows about three and one-half feet from the floor, made to slide up. Lay flat a strip at the bottom, which will keep out a lot of rain. You will also saw out a door large enough to admit the carrying in of a bushel basket and about six feet eight inches high. Have this open into the flying pen.

Saw out at least four holes in the south side, five inches wide and six inches high, the top being oval—these to be used by the birds in winter when the window must be kept closed. Nail a half-inch board in the bottom of these holes, which should extend six inches on each side of the wall to afford a lighting place. If this board slopes toward the outside it will prevent snow. At least four feet from the floor to prevent rats, etc., from entering.

For nests, having some hemlock lumber twelve inches wide dressed down to six-eighths inch, make your nests as per the following drawing. These are much easier cleaned than the old orange boxes, and avoid the trouble of having extra pieces to which the next bowls are to be fastened. If built as directed, screw your nest bowls to the sliding piece, and you are all ready for the birds. Be sure and keep the lowest nests about ten inches from the floor and the highest one the same distance from the roof. Now fasten about twenty-five roosts to the side of the south wall, which are made by taking some one-half inch material, four inches wide and six inches long, tacking the ends together and toe-nailing to the wall. Be sure and place these directly above each other to prevent the birds from fouling each other. Now you are done on the inside and you will set your posts for the flying pen. Get three posts 4x4 by twelve feet, setting them in the ground two feet, twelve feet south of the foundation posts. Use 2x4 scantlings for the cross pieces. One at the top and another at the bottom. Thus it will require three pieces sixteen feet long and five pieces twelve feet long. On the north side of flying pen the wire can be fastened to the building. Use six-foot (two-inch mesh) poultry netting for the top and bottom of the sides and four-foot for the top of the sides. This will allow you a six-foot door to your pen without cutting the top netting. Now make a lighting place for the birds on the inside of the pen by nailing four lath four feet apart against the building. Allow them to extend to the ground at an angle of forty-five degrees. These should be placed edgeways. To these nail four lath running lengthwise as roosts. Place them about a foot and a half apart to prevent the birds fouling each other, and you will be surprised how they will sit on them and enjoy the rays of the sun. For feeding apparatus use your own judgment, but I recommend hopper feeding and make my own hoppers.

Your house is now ready for the birds and you need not be ashamed to place therein the very best birds in the country. Although a cheaper house can be built, a better one is hard to find, and you will be more than pleased. All through you will note a saving of lumber and material of all kinds has been kept in view, and you find after finishing your house, of whatever length it may be, that the off-all is very scarce. This house will accommodate 100 birds very handily, and can be made to house 125 by using the ends for nesting room. If your house consists of several units, make them all just alike with the exception that the inside partition can be made out of plastering laths placed two inches apart. Be sure and have a door to every unit to avoid molesting the birds in any other unit.



FORTY-TWO PENS OF A LARGE CALIFORNIA SQUAB PLANT.

Chapter IV

Racing Homer Lofts

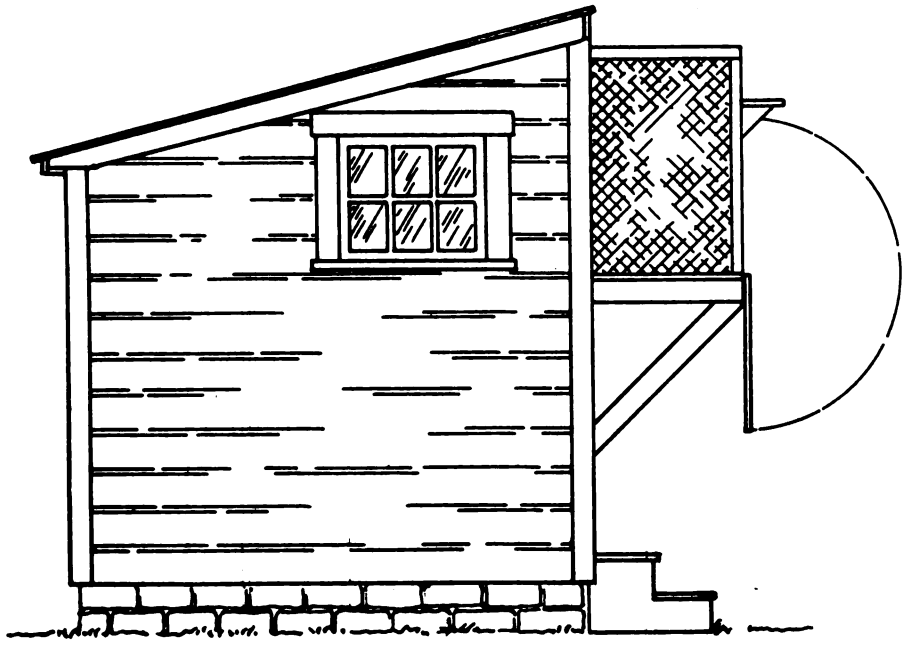
Requirements—Traps—U. S. Army Lofts.

THE Racing Homer Lofts in the United States take many forms and shapes. To list even those which we have visited would occupy more space than is available now, but it will be our endeavor to give some details that will enable the beginner to get a right start in building a Racing Homer Loft and it is barely possible that we may present some ideas that may be new to some readers.

Generally speaking, the lofts here are of what might be called the "shed roof" style with the high part of the roof towards the south or towards the residence. On the other hand, most of the pictures which we have seen of the lofts in Great Britain indicate that it is the general practice there to have the low part of the roof towards the south or the residence. Just why this plan is in vogue we have not been able to learn, but our guess is that the fanciers there prefer to have their birds where they can see them when they alight on the roof of the loft.

The main difference between a Racing Homer Loft and any other kind of a pigeon house is the arrangement and facilities for trapping and catching the racing pigeons when they arrive home from a race. This is a very important consideration, especially in the large cities where large numbers are entered in the races and a minute in "clocking a bird," that is, catching it and removing the counter-mark and placing the same in the clock and starting said clock, will win or lose a race; or at least put the bird down several notches in the prize money. Hence, in arranging a racing homer loft every thought and attention should be placed upon making it easy for the bird to gain entrance and for the owner or manager to catch it and clock it.

FRONT ELEVATION.



SIDE ELEVATION.

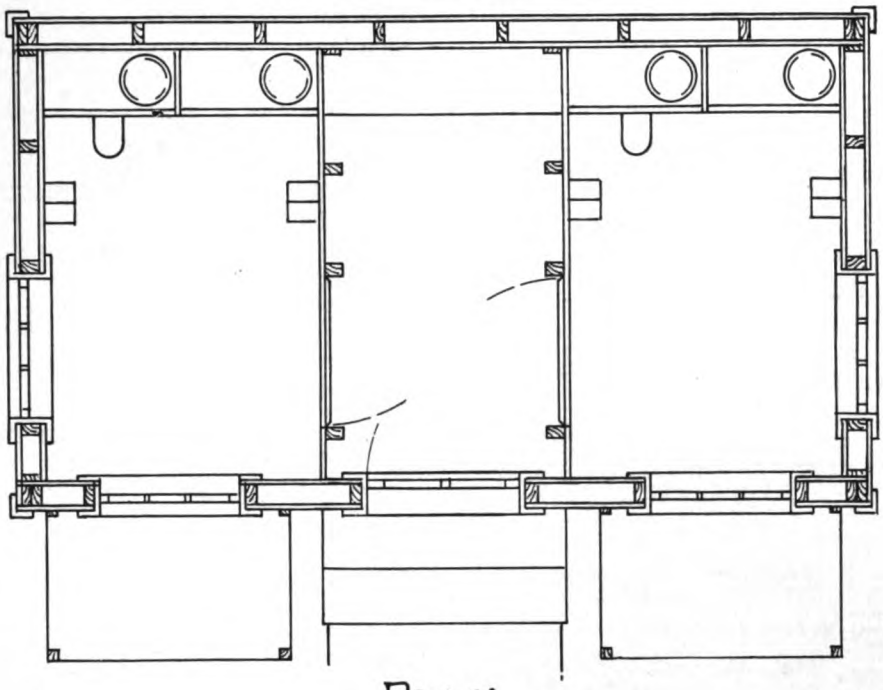
FRONT AND SIDE ELEVATION OF A RACING HOMER LOFT.

While the plan of this book is to illustrate as many different styles as possible, we will first present the most simple style to explain the fundamental requirements. Such a plan is shown in Plate herewith.

This is simply a shed-roof house with a door in front which is intended to divide the house into two compartments—one for the prisoners which every beginner will have and the other for the young birds which will form your first racing team. On the prisoner side we have not shown the fly pen, which is advisable to have, as, if you are to get the best quality of youngsters, these old breeders should have facilities for taking plenty of exercise and have plenty of fresh air out in the open.

The other side is for the racing team and a simple form of observation cage and trip is shown sticking out from the window opening. The lower two-thirds of the front of this cage can be lowered as shown, and this permits the birds to escape. After they are out flying, this opening is supposed to be closed and the birds will be compelled to enter the loft through the trap.

Right here, permit us to introduce an idea which we believe is very practical. There is one fancier whom we knew fixed up quite a large box on the wall of his lift and divided it into two sections by placing bobs were made so as to swing both ways. a pair of "Bobs" in the center. These Into this box he placed the young squeakers just as soon as they had learned



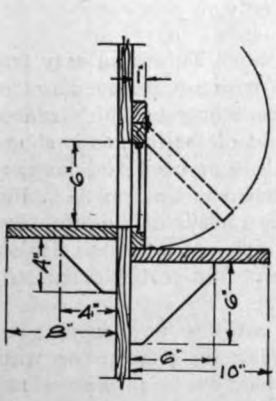
PLAN OF HOUSE SHOWN ON PRECEDING PAGE.

to eat by themselves and at feeding time he fed them on the side which they were not occupying, thus forcing them to stretch through the wires for the feed. They soon learned that these wires yielded and that it was possible to pass to where the feed was. Every man who keeps homers will recognize that this is a very important lesson and we can vouch for the fact that the man who showed this to us never had any trouble with his young birds passing through the bobs, or trapping, as it is called.

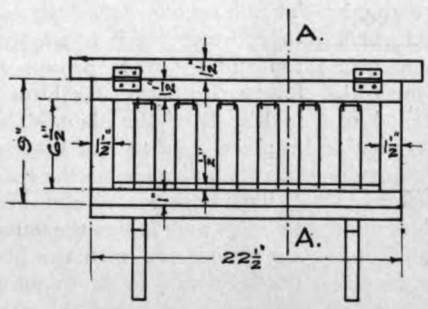
If you have trained your youngsters to pass through the bobs you need not worry about them getting into the house as described above. But, should you not have given them this preliminary training, it would be well to raise the bobs for the first few flights, and later, when they were out and you knew the birds were hungry, you could close the bobs down and by starting to feed, just as the birds were coming in, you would surely get them to enter through the trap. The Army pigeon experts have a "rattler" consisting of an empty can with some peas or small stones in it, which they rattle to call the pigeons to feed or when they want the birds to enter the loft. This is an effective way of getting the birds to come in when you want them.

Entrance Traps.

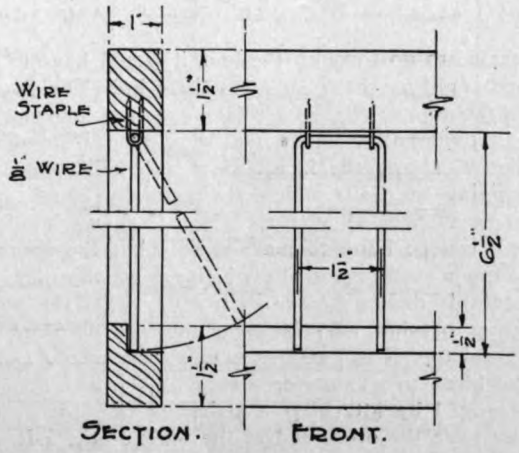
Plates XXI, XXII and XXIII illustrate three different kinds of traps for Racing Homers. Plate XXII is the simplest and the one most commonly used. Fig. A shows a section view which explains all of the details. It will be noticed that the bobs are hung so as to swing in as per the part of a circle indicated, but they are stopped from swinging outwards. It will also be noticed that there is a step-down as the bird enters. In our opinion it would be better if this step was at least two inches down as then when the birds had



SECTION A-A.
FIG. A.

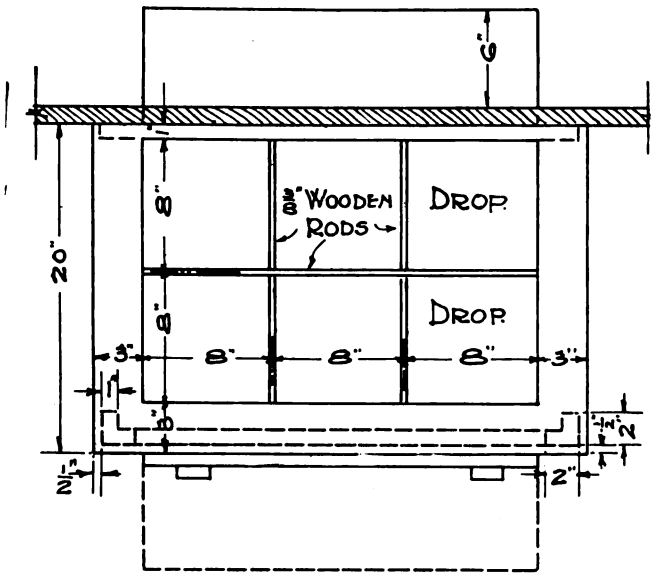


INSIDE VIEW
FIG. B.



ENLARGED DETAIL OF BOB WIRE.
FIG. C.

PLATE XXI—SHOWS DETAILS OF THE ORDINARY "BOB" WIRE ENTRANCE FOR RACING HOMER LOFTS.



PLAN VIEW.
FIG. A.

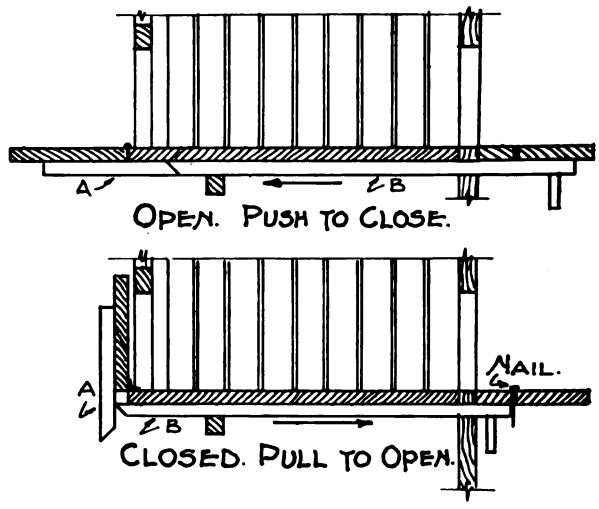
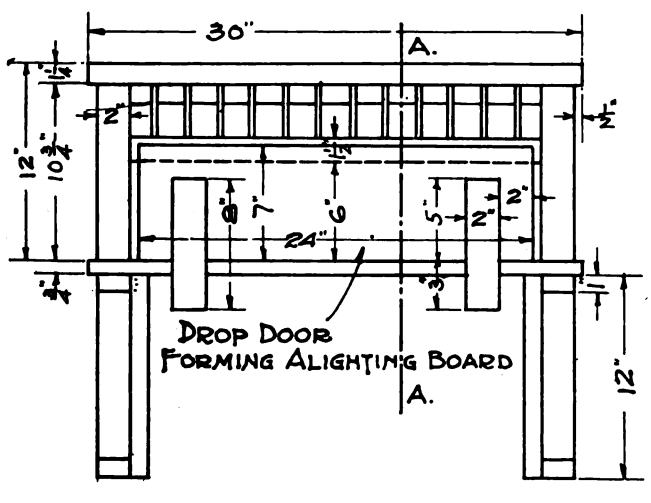
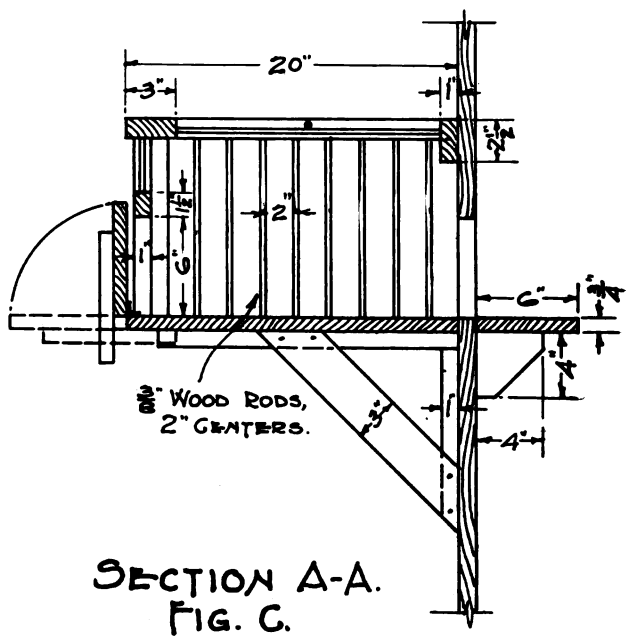


FIG. D.



FRONT VIEW.
FIG. B.



SECTION A-A.
FIG. C.

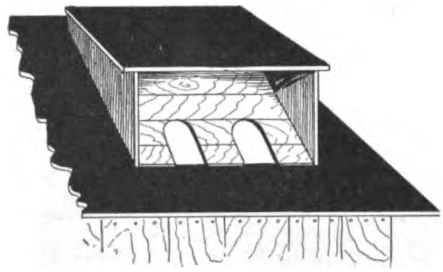
PLATE XXII—A RACING HOMER LOFT ENTRANCE WITH "DROP HOLES" IN TOP.

started to go through the bob, it would have to pass through and could not back out. As these bobs are generally located at the top of the loft, this downward movement is natural and apparently, where we have seen it applied, beneficial. Fig. B shows the inside view and indicates the method of hanging the bobs which are generally bought already made to fit a specified opening. Fig. C shows how a home-made bob can be hung to make a bob, but the general custom is to buy a ready made bob which are usually made of aluminum and this makes a very light bob which the pigeons do not seem to mind. By hanging the bob wire frame by hinges at the top, it is possible to raise the whole frame to permit the birds to go out for a training fly, and this can easily be arranged by attaching a string to one corner of the frame and have the other end at the back of the loft, so by simply pulling it, the bobs are raised; and by loosening it again, they are lowered.

Plate XXIII illustrates a trap entrance for racing pigeons by which the birds gain their entrance through the top. This is usually called the top-drop trap. This is an easy trap to construct as it is simply a cage with square openings on top and a board opening on the front outside which can be lowered to permit the birds to get out of the loft, as is shown in Fig. B of the plate. This trap is supported and fastened in place by a pair of brackets as shown in Section A-A, Fig. C, which also shows the landing board inside of the loft. Fig. D illustrates a very clever device which our artist has devised to raise and lower the outside door. Notice the extra strip under the trap with the beveled edge. By cutting a hole in the loft wall so as to permit this strip to pass inside, you can raise or lower this front opening by pushing or withdrawing this strip and it can be held in place with a nail passing through the inside landing board. This shows that if the pigeon keeper is a thinking man he can think up many devices which will make his pigeon keeping handy and afford additional pleasure in making.

Plate XXIV is another style of trap which is in quite general use in England. In this trap the openings through

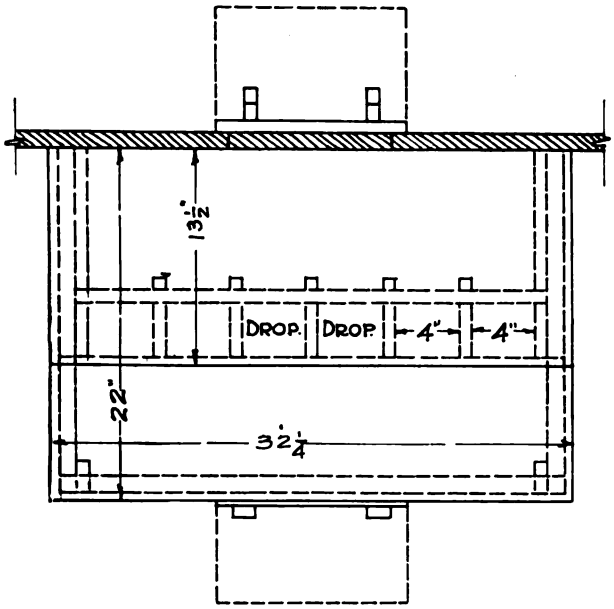
which the pigeons enter are at the front side as shown in the front view, Fig. B. This view also shows the exit opening which is operated similar to that shown in Plate XXII, although in this case it is not shown quite as wide as in the former plate. This, however, is a matter of detail and can be changed to suit the builder's fancy, it will make no difference to the pigeons or the effectiveness of this trap. As has been said, the entrance is through the side, through a square shaped piece of wood which presents its edge to the pigeon as shown in Fig. D, which is a detail of Fig. B enlarged. This detail also indicates how the wood may be reinforced to keep it from cracking or splitting and also indicates that the facing edges should be rounded and made smooth. Fig. C shows the general workings of the trap, and also indicates an inside door for closing the trap opening in cold weather. This board is indicated to drop down, but it could be made in a slide, if the builder so desired. Those



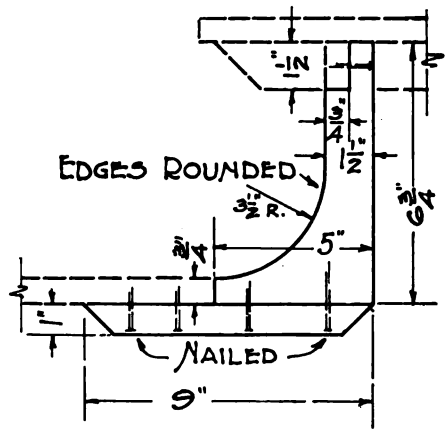
A ROOF TRAP.

who have such a trap with whom we have talked, seem to be very much in favor of it and we believe it has features which will commend itself to racing pigeon men.

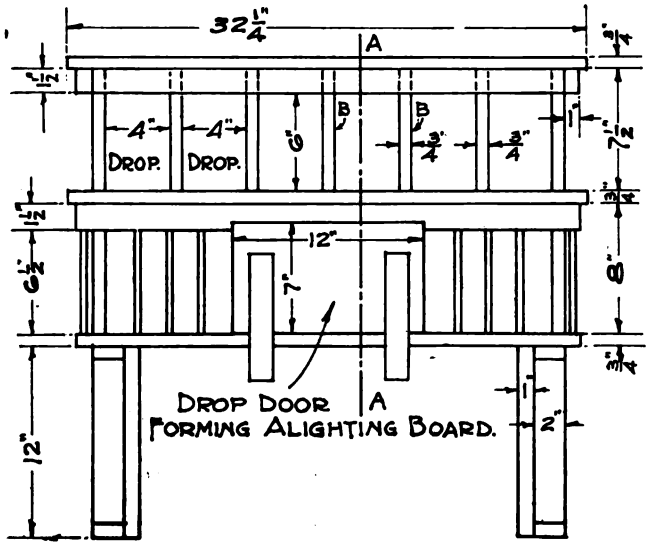
There is one feature of these two traps shown in Plates XXII and XXIII and that is they do away with the necessity of having any other locating cage. By this, we mean, that



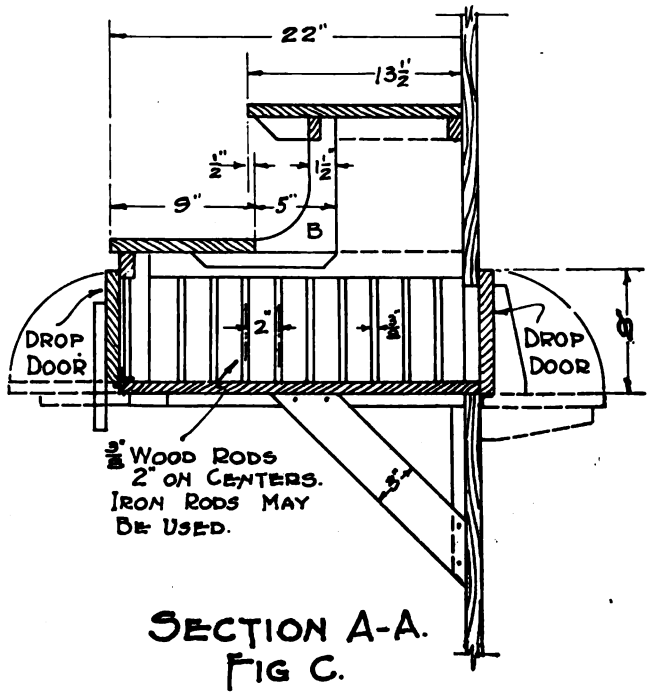
PLAN · VIEW
FIG. A.



ENLARGED · DETAIL · OF B
FIG. D.

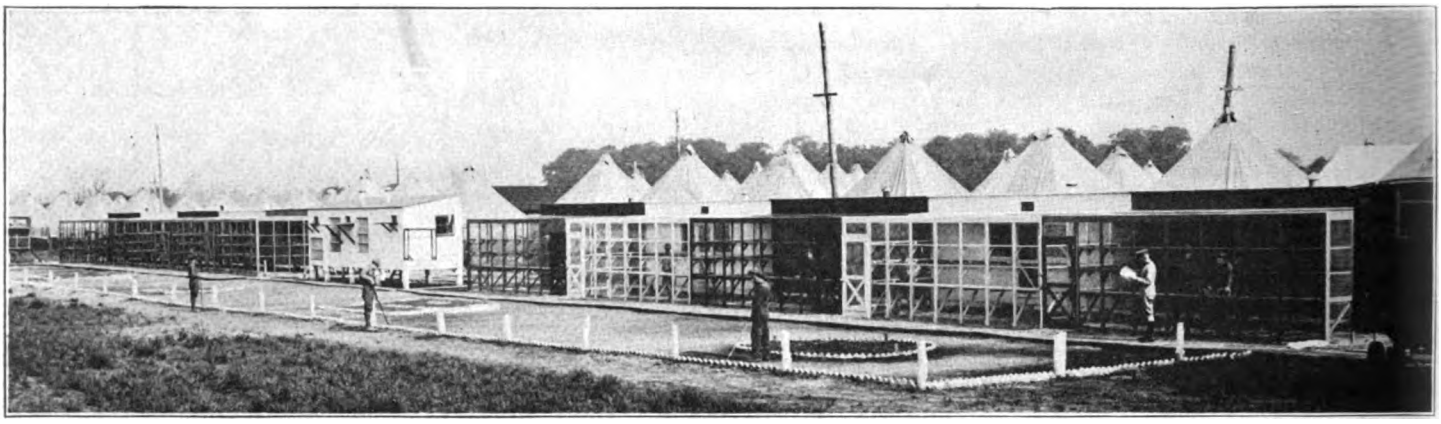


FRONT · VIEW.
FIG. B.



SECTION A-A.
FIG C.

PLATE XXIII—A RACING HOMER ENTRANCE WITH DROP HOLES ON SIDE.



THE U. S. ARMY BREEDING LOFTS AT CAMP VAIL, N. J. NOTICE EACH LOFT IS PAINTED A DIFFERENT COLOR AND THERE IS ONLY ONE ENTRANCE IN THE CENTER OF EACH PEN.

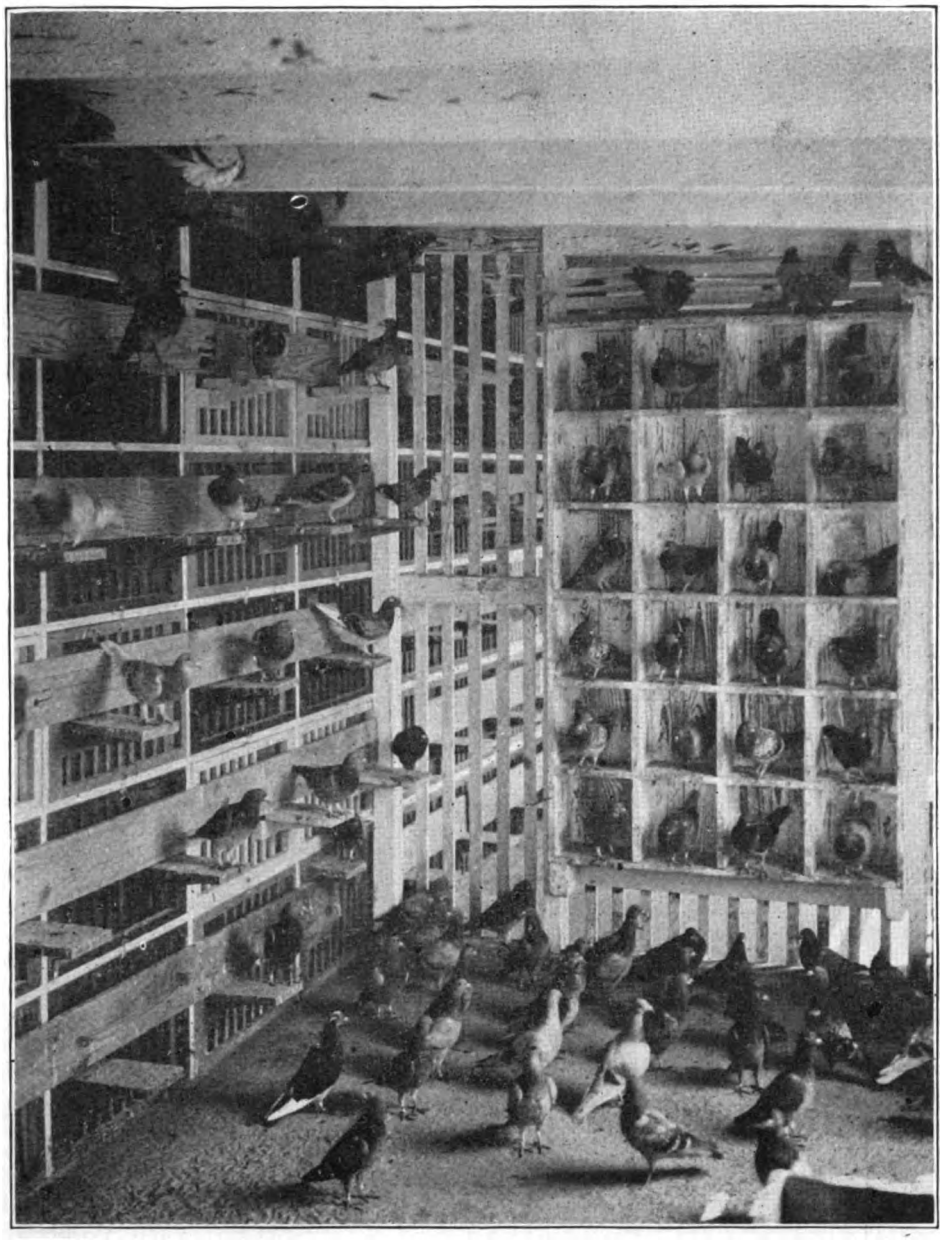
where the trap is of bobs and is set flush with the loft, it becomes necessary to affix to the loft when locating young birds, an extra cage for them to get out and in and view the surroundings; also so that it may learn what kind of an opening or hole in the wall they will have to pass through in order to get back into the loft which is their home.

The accompanying illustration indicates a trap entrance affixed in the roof of the loft, which is a method in use in Atlanta, Ga., and which we are informed is giving general satisfaction. As the illustration indicates this is simply a couple of pigeon holes, but as there is no landing board inside, the bird has to drop down into the loft as soon as it passes through this entrance.

Other Racing Homer Lofts.

Herewith is shown in Plate XXV the U. S. Army Homer breeding lofts, situated at Camp Alfred Vail, N. J., with the tents of the men in training behind them in the background. Notice there is quite a string of them and they are similar in construction and also in inside arrangements. A part of the interior of one of them is shown in Plate XXV herewith, and this will give a general idea of the arrangement. In talking with one of the men about this interior arrangement,

VIEWS OF U. S. ARMY MOBILE LOFTS, WHICH SHOWS THAT THEY ARE COMPLETE PIGEON HOUSES IN THEMSELVES.



INTERIOR VIEW OF A NAVY RACING HOMER LOFT, WHICH IS BUILT ON THE SAME STYLE AS THE ARMY LOFTS.

and upon questioning about the size of the nesting place, he expressed an opinion that it would be better if it were a little larger. We are also of the opinion that it would be more convenient if the door for each nesting place was separate from that of the one above and below, as this would permit confining a pair in a certain place, should occasion arise, when this was desirable. It will be noticed that there is a difference in the exterior color of each section of the long loft in Plate XXV and this is due to the fact that each loft is painted a different color to assist the pigeons to locate their breeding place after a fly. The trap is shown as being located in the small oblong opening in the center of each section just under the roof. However, as most of the birds being bred in these lofts were imported from England and as there is no telling what they would do, if liberated, they are kept pretty close within the large aviaries or fly-pens which are seen in the foreground, which are about eight feet high.

Plate XXVII shows some of the Mobile lofts as were used by the U. S. Army in the late great war and these also are painted different colors on their roof tops. By this difference in painting the pigeons were trained to follow their lofts and we understand that these lofts could be moved a mile or so each day and the pigeons would "home" to it; but when they were moved twenty miles or so it became necessary to place a "locating cage" on top and allow the birds to get some idea of their new surroundings and it took a couple of days of training to get them to home to this new location. This mobile movement of pigeon lofts, was one of the main things which the war taught the racing pigeon man and shows us a new step in the education of this intelligent bird.

In the interior of the mobile lofts as shown, it will be noticed that there are two compartments. One is for the flying bird and the other is for breeding, hence it really follows the same idea as we have shown in our Plate XIX, or our simplest design of loft which was first published by us in 1916.

It is but natural that the land lofts of the U. S. Navy are somewhat similar to those used in the U. S. Army, for the same reason that all pigeon houses are more or less similar. We also show an interior of a navy loft and it will be noticed that everything is literally "ship shape." We understand that our navy has accomplished much in training Homing pigeons to fly over sea, although we have no authentic records of such feats which we can publish. From what the army did with the mobile loft, it would appear that pigeons might be trained to "home" to a battleship and follow it in its journey from place to place. If so, we believe this would be a new step in advance in pigeon management and lead to even longer flights in the future than we have ever recorded in the past.

In our preliminary remarks about Racing Homer Lofts, we mentioned that the fanciers of Great Britain seemed to have a different idea of location of the roof and we append herewith a group of three pictures; also an exterior and interior of an English loft which illustrate this idea.

Somewhat after the English idea is the loft of Mr. Chas. Heitzman as described below:

This loft is eighteen feet long, twelve feet wide and seven feet high at front, sixteen inches above ground and sets on concrete piers to allow air circulation under floor and avoid dampness.

The windows are made of heavy frames with a lattice work of wood dowel sticks ⅝ of an inch in diameter, to prevent the birds getting out when the windows are open. They add wonderfully to the appearance of the building when painted jet black. Between the two windows is the landing board and trap arrangement.

The entrance to the loft is through a door which is located in the rear and immediately inside there is a kind of a lobby, three feet wide, extending to the front, which divides the loft into two rooms, or compartments: one for old birds and

A LOUISVILLE, KY., RACING PIGEON LOFT. (See description.)

the other for youngsters. The entrance to each is from the lobby through sliding doors which are just as handy and take up less room.

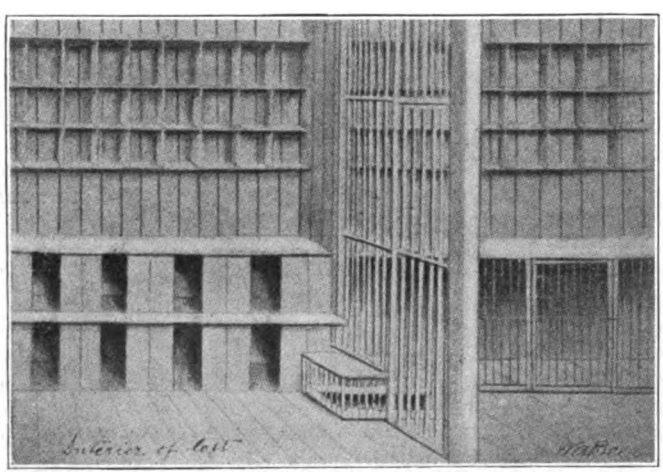
In this lobby there is an electric light, a chair and a small wall cabinet with glass front in which is kept the loft records, bands, china dummy eggs, etc. The small doors for the water fountains also open into this lobby and thus the birds are watered without disturbing them, or entering their loft.

The bird returning from a fly or race, enters through the set of bobs shown as closing the small oblong opening above the name sign, in the cut. Inside is a cage, which may be which permit the birds to enter into their respective compartments; but either or both of these can be locked with a small ¼ inch iron rod, which keeps the returning pigeon in this retaining box until it is liberated. From the lobby side, there is a door opening into this retaining box, so the keeper or attendant can catch the bird and take off its counter-mark, if it is entered in a race.

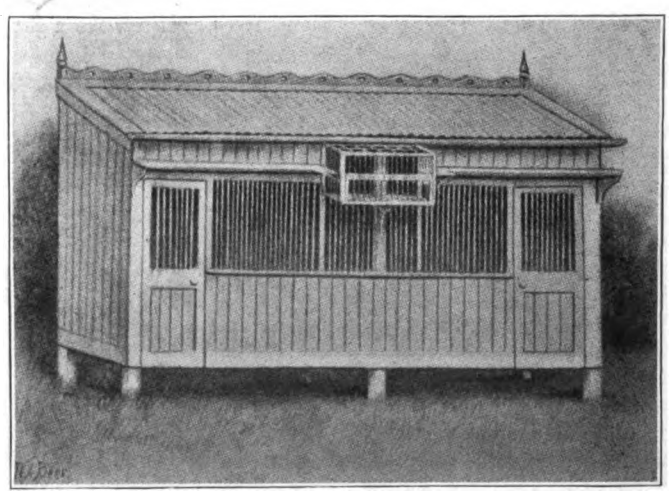
When the birds on one side of the coop are out, the bobs on the opposite side is closed, so no returning bird will get into the habit of "rubbering" into the adjoining loft. In the lobby, also, are the bins for the feed, which are constructed so the grain is properly ventilated at all times.

The nest compartments are three feet long, eighteen inches deep and sixteen inches high. Each nest has two doweled frame doors and a small shelf eight inches from the floor of the compartment, upon which is placed the nest bowl. One pair occupies the same compartment during the entire breeding season and they are roomy enough so that when the birds are shut up for hours at a time it does not seem to make any difference to them. When the young are hatched and about ten days old the nest bowl is lowered to the bottom of the compartment and a new bowl placed upon the shelf in a day or so for the next nest of eggs.

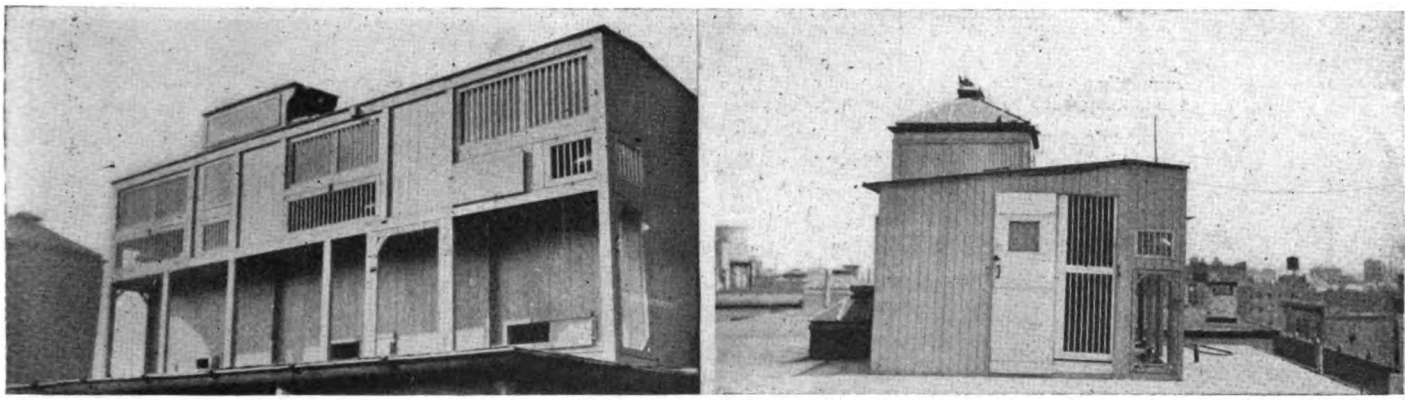
Each nesting compartment has a metal card holder fastened to the outside in which is placed a card upon which is kept the complete record of the pair and this is transferred to a permanent record book later. This part has an ingenious device, or idea, in the shape of a small wooden box which is placed into the compartment when the young birds are about five days old and in which the old birds are fed. The purposes of this is to show the young how the old birds eat and they soon begin to get out and to pick up some grain for themselves, which relieves the strain of feeding from the old pair and nourishes the youngsters better. While this idea is O. K. for racing homers as their young are supposed to be precocious and to be out early, your author is of the



INTERIOR VIEW OF AN ENGLISH RACING PIGEON LOFT, SHOWING WALL ARRANGEMENT OF NESTS AND BOX-PERCHES.



EXTERIOR VIEW OF ENGLISH RACING PIGEON LOFT, SHOWING LOCATION OF TRAP, ETC.



THE BELNORD RACING PIGEON LOFT, LOCATED ON TOP OF AN AFARTMENT BUILDING IN NEW YORK CITY.

opinion that for squab breeding it would be better to keep the nests dark and keep the young as quiet as possible.

Three styles of perches are used: the inverted "V" perch, the box perch and the small round perch. The birds are fed in trays which are 24 inches long, 3 inches wide and 1½ inches high with the bottom in the center, thus they may be turned over if soiled and the feed placed upon a clean side.

To the right in the picture is shown a small part of the fly-pen or aviary which is twenty feet long, seven feet six inches high and seven feet wide. Here the breeding birds can enjoy the sunlight and showers. There is sand and a bath and it is covered with ¼ inch wire.

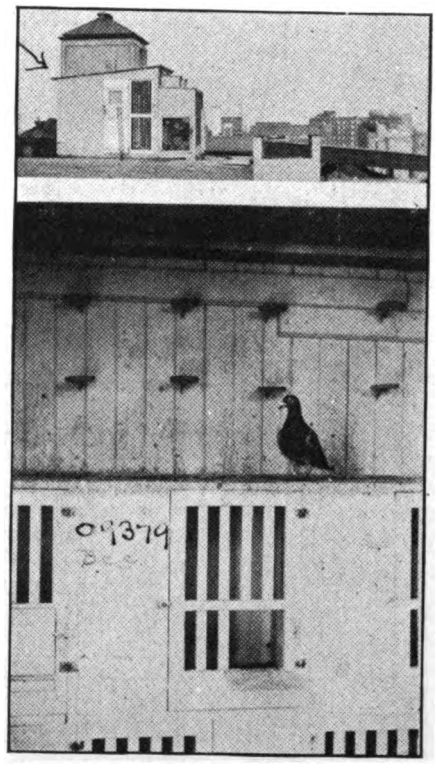
Pigeons on the Roof.

HEREWITH will appear illustrations of a Racing Homer Loft which ranks as one of the best in New York City, at least it appears so when we watch the race results of last year (1916). The reports of this loft were so good that we wrote to Mr. Vincent asking for particulars. The loft is located on the roof of a large apartment building, "The Belnord," and its floor is 210 feet above street level. In the illustration it will be noticed that the loft is placed up close to the elevator shaft of which there are fourteen in the building. This protects it from the east wind, and you will note in the rear of the house a sky light which lets light into the section immediately under the roof. This sky light holds the house from moving in a northerly direction. On the south side, if you look closely, there is a piece of 4-inch pipe which comes out through the roof just in front of the aviary and is a vent for a large sewer waste line that runs down through the building. This holds the house from any movement in a southerly direction. However, I might state the house has never budged since it was erected two years ago, although it has been subjected to some frightful winds.

The house itself is 8x12 and is 7 feet high on front and 6 feet 6 inches in the rear. The roof is a gravel roof on top of heavy tarred paper. Immediately under the house I bonded the gravel together with a light coating of concrete and rested some sleepers on this concrete and built the house on top of the sleepers, so that there is perfect freedom for any water to run out from under the house. I also concreted the roof immediately surrounding the house for walking purposes so as not to crowd the gravel into the roofing on a hot day.

The house itself is divided into two parts with a dowel partition. As I have no prisoners, I use one side for youngsters or for separating the sexes in the winter. You will notice on top of the aviary two small projections which give me an entrance into each side, but this has since been changed to one entrance and I have a swing flap operated from the inside that will close off the bob wires to either side as I may desire.

In the upper part of the aviary in front of each half of the house I have an outlet with a swinging front that quite resembles a shipping crate and I put the birds in there and then drop these fronts when I let them out for flying and let them bob back again through the upper entrance. In the very center of the aviary between these two outgoing places I have a little partition and keep the watering pan in there with a small rest on the inside of the house so that the birds have to fly up and poke their heads out through a lattice work in order to get a drink of water. This I believe is of considerable value because they are always taught continually to reach their head out through the dowels to get a drink and that is usually the condition in the shipping basket so that whenever they are away on a journey it is nothing new for them to have to reach their head to get some water.



INTERIOR OF LOFT ILLUSTRATED ABOVE.

I also have a little ventilator set right in the center of the roof, which you will note in the illustration. The roof is covered with the Johns-Manville Asbestos Roofing, and it is absolutely waterproof. I keep the floor of the house sanded all of the time, and there is seldom a day goes by that is not thoroughly cleaned and raked.

Of course you can understand that we are exposed to some terrific winds and the weight of the house itself is considerable, but if it was not locked in the way I described in the first part of the letter I am afraid it would cause me considerable anxiety as to whether or not I would find there sometimes after some of the storms which we get.

If you could look in the opposite direction from the way in which No. 1 picture was taken you could see the Hudson

River, as we are only a short distance from it.

The Belnord Apartment House occupies the entire block from Broadway to Amsterdam avenue and from 86th to 87th street and is rectangularly shaped with an interior court of 94 feet by 231 feet.

The second illustration shows a section of my nest outfits and would state that there are six compartments in each set. They are quite roomy and about half way up the blank space on either the right or the left hand side of the gate is a shelf holding the nest bowl. I find this type of box very satisfactory because when the youngsters are a pretty good size and before the hen started to lay again I could take a bowl of youngsters and put them down on the floor of the box and put a new bowl on the shelf. The inside of the box is about 22 by 22 inches, by 16 inches deep, although if I had the room and was going to make them over again I would leave the door in the center and on either side of the door have a shelf just off the floor for the bowls on each side so that it would not be necessary to do any handling in the boxes any more than would have to be done, as I found once in a while that the birds acted very strangly when they found the youngsters down on the bottom when they had been in the habit of jumping up off the floor to the nest bowl, although I can say that it never produced any serious results to my knowledge.

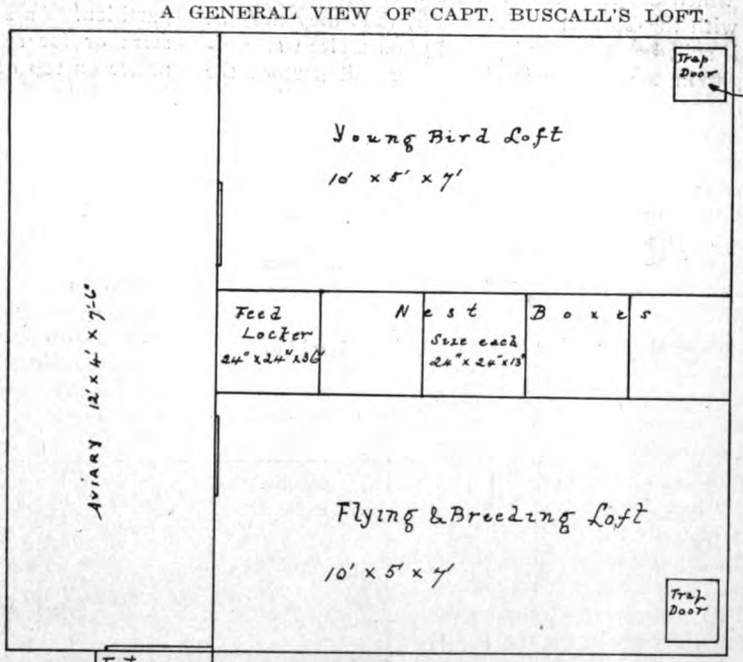
You will notice in the picture that one of the nest boxes is open and one closed with a button on it showing the method of closing up. The top set is staggered over the bottom set in order to avoid one bird dropping over another.

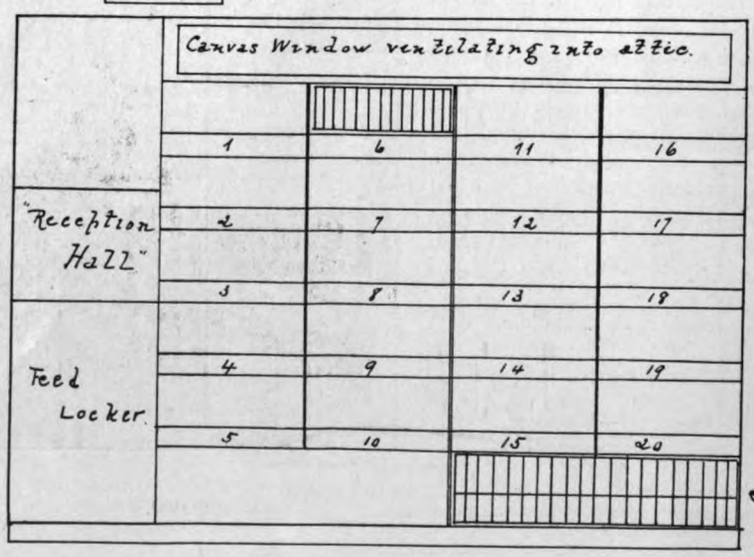
A GENERAL VIEW OF CAPT. BUSCALL'S LOFT.

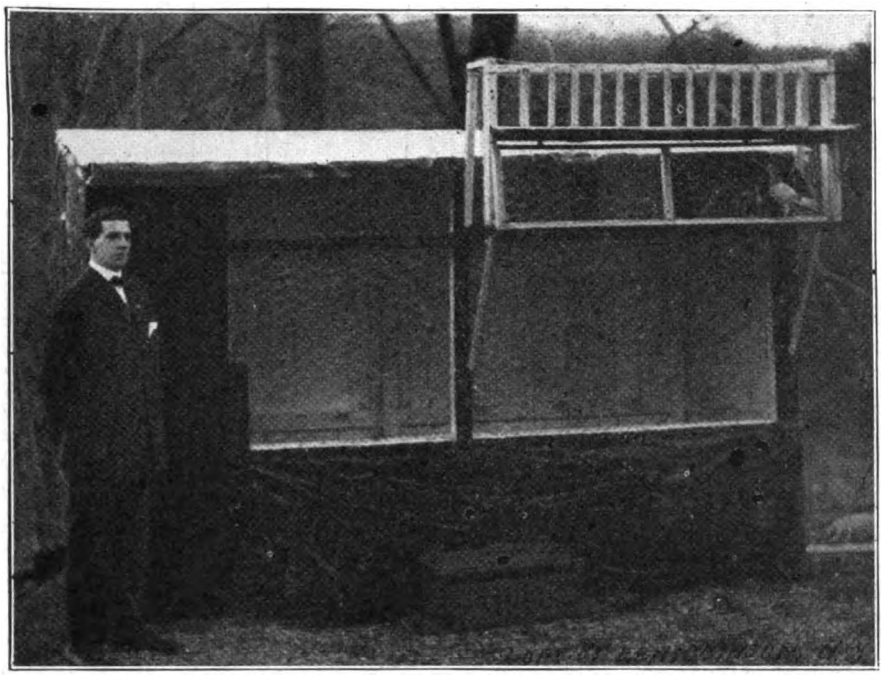
A Modern Flying Homer Loft.

In connection with article will be found illustrations of the new racing Homer loft by Mr. D. C. Buscall, financial secretary of the American Racing Pigeon Union, located at Riverdale, Md. This house is 12x14 feet ground measurement, which is divided into three compartments as shown by the floor plan (Fig. 1), which gives two lofts—one for breeding and one for the racing birds—5x10 feet each. These two lofts are divided by what seems to us to be a useful and ingenious row of nesting boxes. Each of these boxes is 24 inches square and their location and arrangement is shown in Fig. 2. These nesting boxes can be opened into either side so that one may be occupied by birds in the racing loft and the next one by birds in the breeding loft, or they can be closed entirely for mating purposes or when not in use.

Proper ventilation into the attic is arranged through a canvas screen which extends the whole length above the nesting boxes as shown. Through a reception hall the birds are admitted to the aviary from either loft and from the aviary they can get







BELFAST LOFT—A GOOD STYLE OF SMALL RACING LOFT.

to the racing trap. On the left side of the aviary there is a wire door, 4 feet square, which can be opened by pulling a cord which allows the flyers to get out for exercise.

At the present time this loft is accommodating fourteen pairs of racers, all of which have flown races.

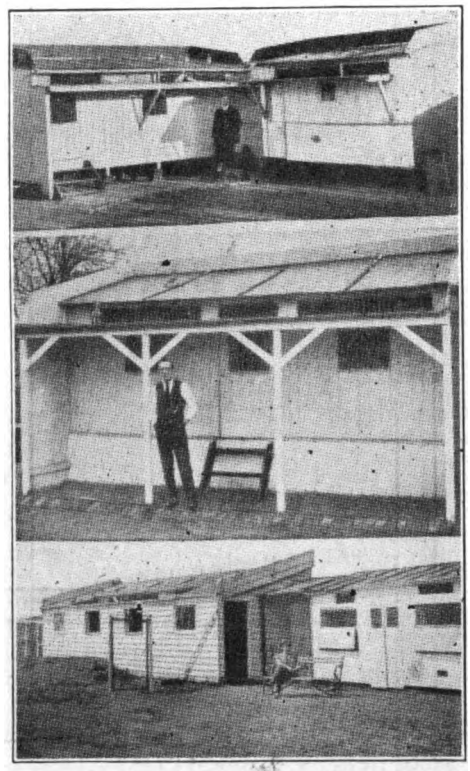
Types of Small Racing Pigeon Lofts.

Owned by E. E. Higginson.

The following is a brief description of the Belfast loft and its owner's methods of feeding and training his pigeons. The loft is modern, arranged to meet the requirements of the everyday pigeon.

Fourteen feet long, 7 feet 6 inches high, 5 feet wide, contains twenty 14-inch box perches, six flat 2-inch perches, concrete floor, front open winter and summer, running water from a spring; has electric lights and fitted up with electric bells. The owner makes a practice of giving his pigeons their morning exercise at about 5:30 a. m., which usually occupies about one hour. The birds are given their liberty all day, are fed twice a day, first thing in the morning and then in the evening. Their feed consists of Canada peas, whole corn and kafir-corn; the proportion of peas is about three-fourths, and twice a week lettuce or watercress is tied up in the loft; beef scraps once a week. When the birds are moulting a little linseed cake is given them.

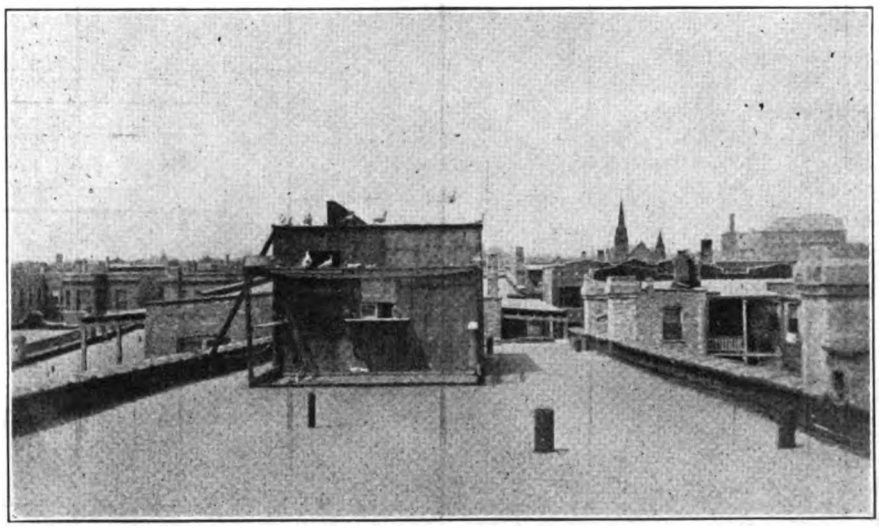
Another racing pigeon loft is the Steffen Loft, which is shown in the accompanying illustration and this loft is located on top of a three-story apartment house in Chicago's great West Side. It will be noticed that this is about the tallest house in the neighborhood, about half a block away in the opposite direction is a large church steeple, around which the Homers seem to delight to fly when on the wing.



THREE VIEWS OF ENGLISH LOFTS, SHOWING THEIR GENERAL PRACTICE AND STYLE.

This loft is ten by sixteen feet and sets upon the roof without fastenings. It is divided into five rooms by dowel-stick partitions. Across the front at the entrance, which is at the opposite side from what is shown in the picture, there is a small compartment for keeping the records, feed, etc. The balance of the coop is divided down the middle with a partition and in the one on the right, or the west side, is placed the racing team. The other half is again divided into two rooms which are used for breeding, but as soon as the young come they are transferred into the racing side.

One unique contrivance in this loft which we have never seen before, is an electric fan for the purpose of removing any bad oders and to also remove some of the moisture on damp days.

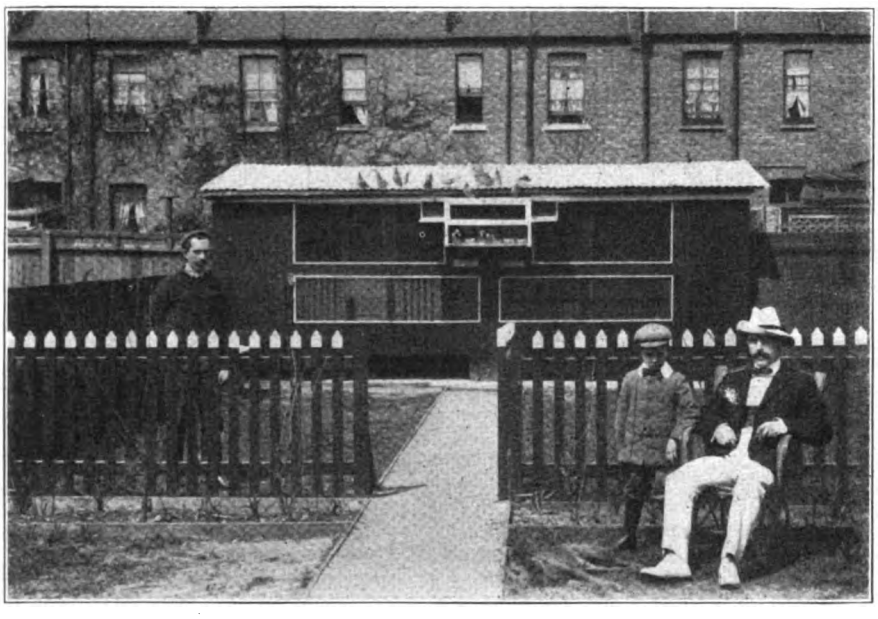


THE STEFFEN LOFT IN CHICAGO, ON TOP OF A THREE-STORY APARTMENT HOUSE.

Mr. Counter's Racing Loft and Trap.

My loft is seven feet high at back and six feet in front, and nesting boxes are placed at the ends. However, they can be easily adapted to suit other arrangements.

I am enclosing a photo of the loft I used in England, and with the exception of a few improvements, this is the same as the loft I am using now. I find that there was too much wire-work for this country, so I have boarded up the bottom half. In the winter I have frames covered with cheese cloth to fit the spaces where the wire is shown. The position of the trap nest I have changed to the plan as shown herewith and



MR. COUNTER'S LOFT IN ENGLAND.

which is based upon a dormer opening for the trap. This dormer is twelve inches high, where the trap joins it and goes back to the level of the roof behind. This dormer also acts as a ventilator, taking off the foul air without any drafts. In the winter I also use a cheese cloth covered frame over this dormer opening to the trap.

The trap has bolting wire all around the top part and a door that slides up and down in the bottom half closes off the birds from the front pen when necessary. This front pen is used as a bathroom and also for putting young birds in before giving them their liberty. By such a place they get a good idea of the surrounding buildings and can see the old birds going in and out. Two or three hungry birds placed in this pen and fed when the racers drop will be a great help to quick trapping.

Of course the door from the trap to the front pen will be closed on race days. A drop door in the end of the front pen lets the birds out to fly.

I am sending a small sketch of these arrangement which I hope will explain these things better than words. The box below the front pen is where the birds are watered, and this can be reached and the water changed from the outside. A hole is cut in the front of the loft and a frame inserted. This frame is made of ⅛-inch wire rods 2 inches apart, and the birds inside put their heads through to drink. The water is in this way kept clean and can be easily changed without disturbing the birds.

There is a partitition in the middle of the loft made of lath. This separates the old and young birds in breeding time and in winter separates the cocks and hens. One water pan and one trap does for both lofts.

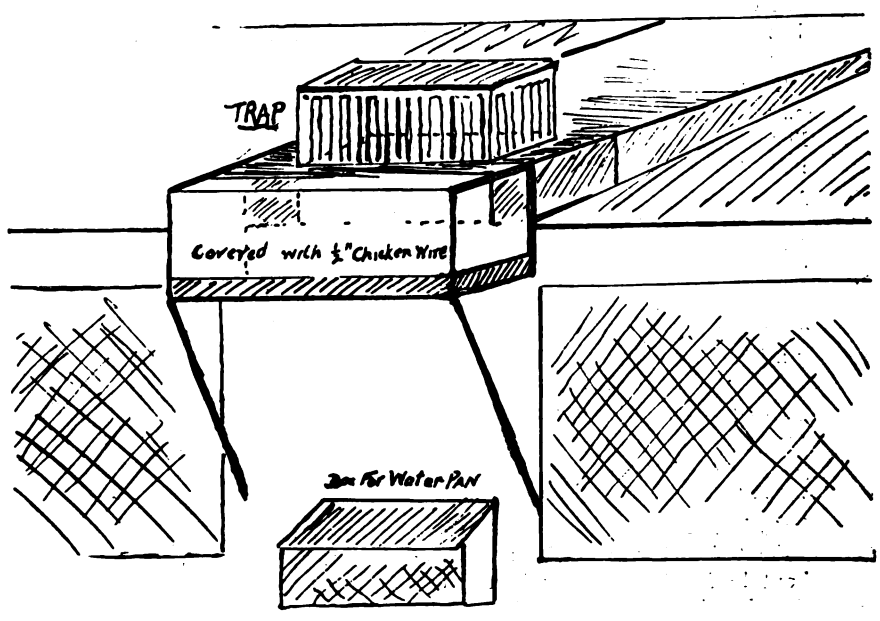
The back of the loft is fitted with box perches made of ¾ x 4½-inch lumber, and each box is 12 inches square. I don't like the inverted "V" perch, as I find it tends to give heavy youngsters a crooked or twisted keel. The birds are fed in troughs three feet long by 4 inches by 1½ inches high. They are taken out and cleaned after each meal. I would impress upon beginners the necessity of keeping everything scrupulously clean.

Before feeding the grain, I put it into an old stocking leg and shake it up and down well and from side to side. This removes all dirt and dust.

I trust these particulars will be of interest to young readers. Encouraging pigeon keeping and racing is my hobby.

Comments.

It has been impossible to show every style of Racing pigeon loft, but it is hoped enough suggestions are offered to put racing men on the right track. Additional suggestions will appear in the American Pigeon Keeper as they are discovered and it is hoped that such publication will encourage racing in this country.



DETAIL SHOWING TRAP ARRANGEMENT FOR RACING PIGEON LOFT.

Chapter V

Lofts for Various Fancy Varieties

Pouter Loft—Jacobin Loft—Runt House—Fantail Loft—Egyptian Loft, etc.

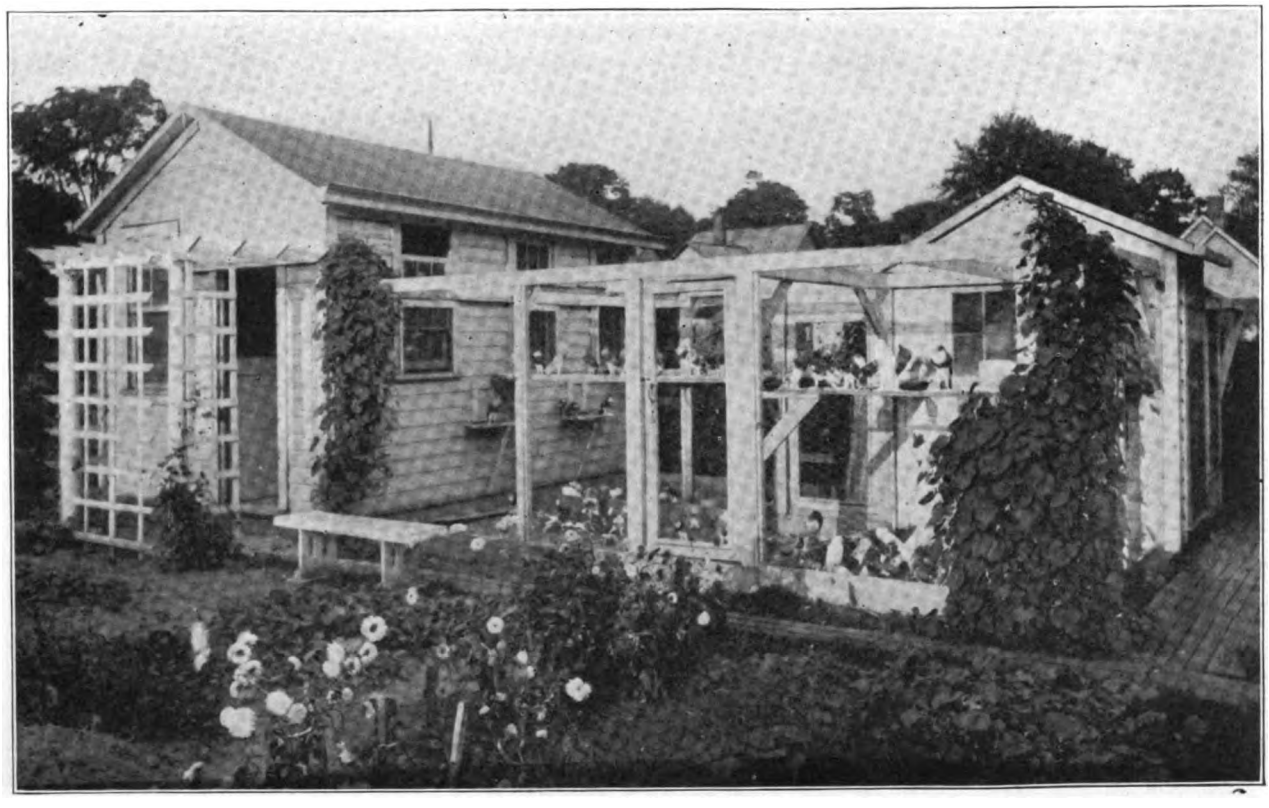
THE lofts for fancy pigeons are found in a variety of forms and locations and we doubt if there is any one style or shape that will suit everybody. The fact is that the great majority of them have not been built for the specific purpose for which they are used, but are generally to be found in some building that was erected for another purpose. This condition of affairs emphasizes the fact that fancy pigeon men are pursuing a hobby and being men of moderate income, have shown their resourcefulness by making use of such opportunities and facilities as were at hand, and which would make it possible for them to pursue their fancy at the least initial outlay. It is for this reason that many of our most prominent fanciers are not making much of a boast of their pigeon house facilities and this has made it difficult for us to show as many of such houses as we would like in this work.

But a few fanciers have gone to the expense to build houses for the specific purpose of keeping and caring for their pets and some of these we will illustrate. It is from these that we anticipate that other men will get ideas which they will later use in building more suitable accommodations for their pigeons. While most pigeon fanciers do not enter the hobby for the purpose of making money, some of them do derive some revenue from the extra birds they dispose of from time to time, and it is these that are able to spend something in fixing up better quarters for their birds. However, we must say that the fancy pigeon does not seem to mind the quarters in which it was reared and we have seen some swell specimens come from very humble pigeon lofts.

The owner's pleasure is much increased when he has a fine loft in which to display his fine pigeons, and we believe there is a tendency towards greater improvement in this direction, for the true fanciers seem to realize that nothing is too good for his pigeons.

A convenient and commodious loft also helps to spread the pigeon fancy and it should ever be borne in mind that this spreading of the fancy is what lends excitement to this sport. Hence it is hoped that this good word will go on and advance the interest in pigeon keeping.

As a first illustration we are pleased to be able to present a plan which was submitted by Mr. Chas. Wagner of Canada, who is an architect as well as a pigeon fancier of long standing. In this plan it will be noticed that he has given us many details, even to the cement foundation and shows how it prevents the Mr. and Mrs. Rat from gaining an entrance. This house, while adapted for English Pouters, would serve as well for any of the larger and slower breeding varieties; such as the Carriers, Trumpeters, Jacobins, Fantails, etc. Also notice the practical information imparted about the management of birds in such house.



THIS PICTURE ILLUSTRATES WHAT IS POSSIBLE IN A FANCIER'S LOFT TO MAKE IT ATTRACTIVE. THIS LOFT IS LOCATED IN CLEVELAND.

How to Build a Pigeon House.

By Chas. F. Wagner.

Sec'y, National Pouter Ass'n.

To be successful in raising pigeons, a breeder must have a convenient loft, properly equipped. It matters not what kind of pigeons are to be bred.

If I were building again, I would plan a house somewhat in the shape of the letter "E" without the center prong. I would face the building south, the two wings would cut off the east and west winds. I would have 6 compartments with 16 coops in each, which would accommodate 96 pairs of pigeons. I would have the feed room at one end, which would be used as a hospital if necessary. The flights in the center would be surrounded on three sides by the building, as shown on floor plan, Plate xx, Fig. 1. The flights I would cover with ½-inch mesh galvanized wire, which would prevent mice and sparrows from entering.

The height of the building inside should not be more than six feet at the lowest side, which should be the back. In this way we drain the roof water away from the flights.

A building 9 feet inside would be 6 feet 4½ inches at the highest side. See Section A. B. Fig. 1, Plate xx. In a building of this character the birds soon become tame and can easily be caught without fluttering.

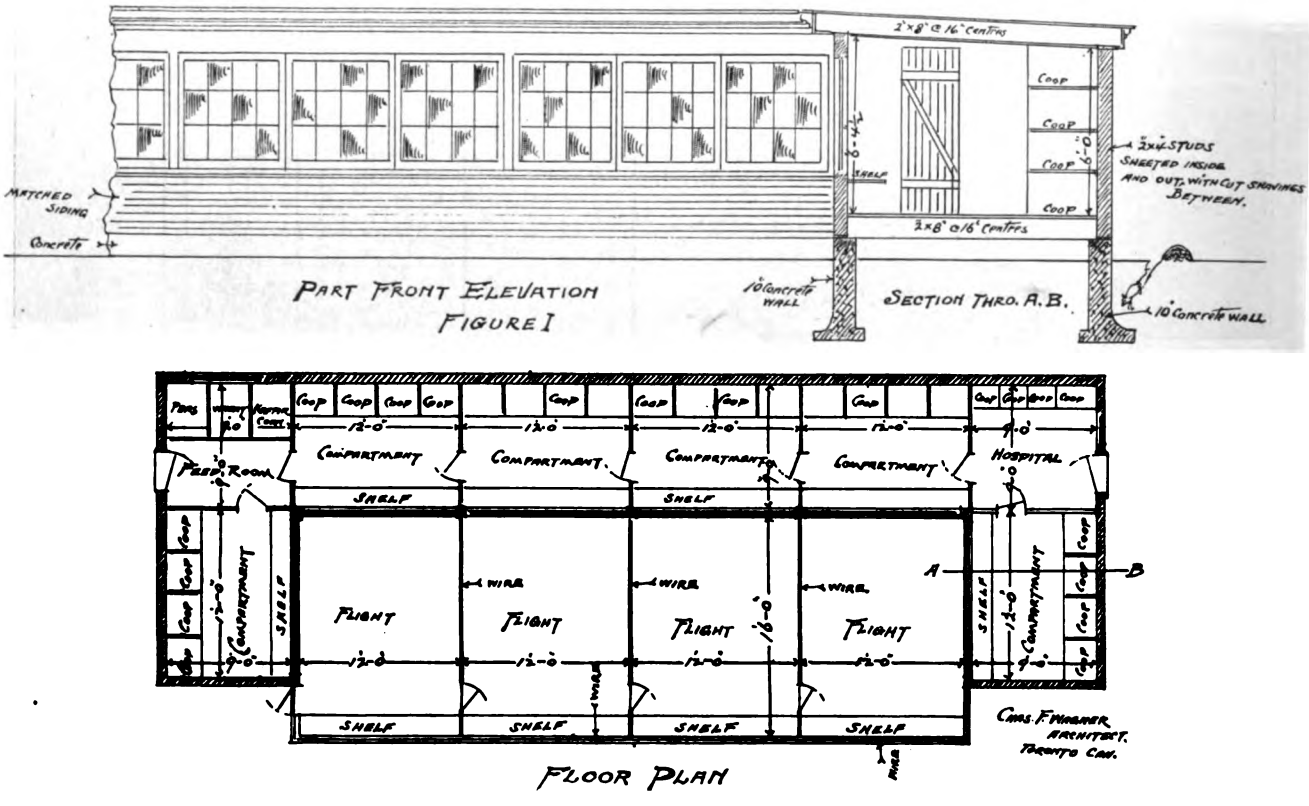
The foundation should be at least three feet in the ground to prevent the frost from heaving it. (See Section A. B. Fig. 1.) This should be built of concrete, composed of four parts of broken stone about two inches in diameter, two parts clean, sharp sand to one of Portland Cement or other cement of equal quality. In mixing the ingredients they should be turned over at least three times dry and three times wet with plenty of water. Concrete that runs into the trenches like "porridge" sets up very hard. The walls should be built of bell cast at the bottom of the outside as shown on Section A. B. Fig. 1. This is to prevent rats, etc., from digging under. The walls should rise one foot above the level of the ground to prevent rodents from gnawing through if the superstructure is built of wood.

On top of this ten inch wall of concrete, build a frame structure; I say frame because I believe wood is warmer than brick, stone or plaster. On top of the concrete walls lay two 2 x 4 inch studs at 16-inch centers and another 2 x 4 inch plate on top to carry roof joints. Sheet studs inside and out with ⅞-inch x 6-inch hemlock matched boards. Put chipped shavings between the studs, packed in just tight enough to prevent settling down.

Allow me to explain my reason for this. You know there is not any better non-conductor of heat and cold than air itself if it is prevented from traveling, therefore, by using chipped shavings packed in as above described, they form so many air cells between the chips. The shavings prevent the air from traveling; consequently we have a dead air space between the studs and also roof joists. The shavings should be put in perfectly dry and kept so until roof is on.

A building of such height should not be more than 9 feet wide from front to back, inside measurement. The reason for this is that the window openings, which should be four feet high by the full width of each compartment, are just sufficiently large enough to allow the fresh air to reach the back of the building without draughts. The air in a deeper shed than this will lie dormant at the back when there is little wind blowing on a hot day or unless there are other openings in the back which are objectionable, causing draughts.

On top of the concrete walls, set 2 inches x 8 inch hemlock joists at 16-inch centers with one row of two inch by two inch bridging in center. The wall being one foot above the



ELEVATION AND PLAN OF MR. WAGNER'S SUGGESTION FOR A FANCIER'S PIGEON LOFT.

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

ELEVATION OF COOPS
Fig. 3

level of the ground, allows an air space underneath the floor; this space should be ventilated through the wall with 6 inch by 12 inch air bricks with shutters to close in the cold weather. These ventilators should be about twelve feet apart. The reason for this is to prevent dry rot. These floor joists should be covered with two thicknesses of 1 inch by 8 inch boards with tarred felt laid in between.

The roof joists should be 2 inches by 8 inches at 16 inch centers covered on top and ceiling with ⅞-inch by 6-inch matched sheeting with shavings between.

The best water proof, heat and frost proof roofing is that known as "Asbestos Roofing," with white finish on top. This does not draw the sun like felt and gravel.

The matched sheeting on the walls should be covered with tarred felt lapped at joints; on top of this lay ⅞ inch by 6 inch clap boards or matched siding. Paint and decorate to suit.

The divisions between the compartments should be made of ⅞ inch matched hemlock sheeting. These rooms should be 9 feet by 12 feet.

At the back wall, erect three tiers of shelves 18 inches above each other as shown in Fig. 3 and also shown in A. B. Fig. 1. Then divide these shelves into four compartments with three divisions up and down, making 16 coops in each compartment. These shelves should be 2 feet by 6 inches from front to back.

The advantage of this number of coops in each compartment will be readily seen. When there are 16 pairs of pigeons in one compartment they must be allowed out for exercise occasionally without getting mixed up when going back to their pens. If all are let out at once, there surely would be a mix up. If half are let out at the same time, the same thing would happen, so we must work this to the best of advantage.

We will let out four different pair each day (See Fig. 3), in this way, say Nos. 1, 3, 9 and 11 get out on Monday; 5, 7, 13 and 15 on Tuesday; 2, 4, 10 and 12 on Wednesday; 6, 8, 14 and 16 on Thursday. All will have been out in turn and then begin again with the first door and so on. In this way we can accomplish much without having the painful experiences of finding eggs and young ones thrown out of the nest, which so frequently happens in squab plants and other lofts.

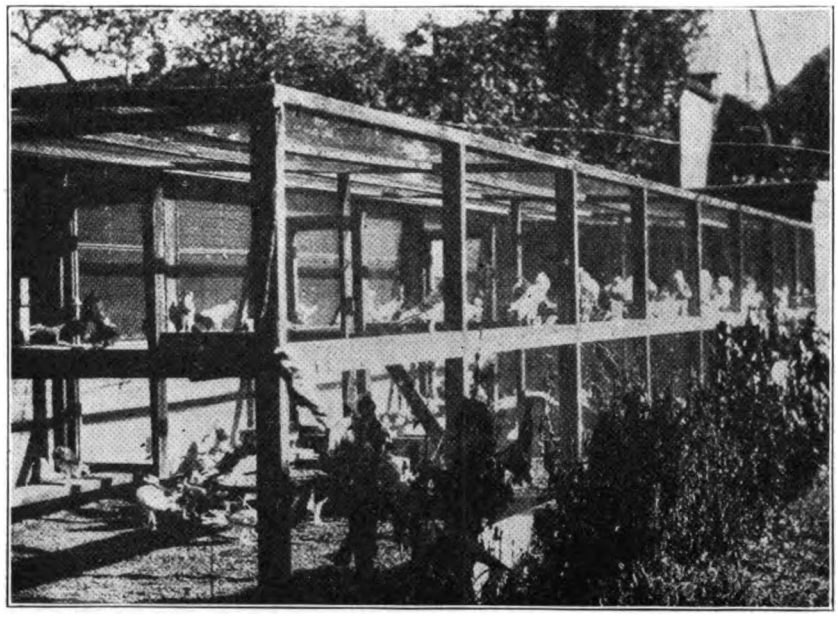
The front of these coops should be made of laths with a door 10 inches wide in center, by the full height. These fronts should be made portable. Each front should be numbered for reference in stud book.

This plan of cooping is frequently used by breeders of Pouters, Fantails, Jacobins, Carriers, etc. This arrangement comes in very handy when training pigeons for the show pen. In the case of Jacobins, Carriers and Magpies, the fronts of the pens are covered with cotton just high enough for the birds to see over. In this way the pigeon soon learns to stretch and hold himself in an upright position as tall as possible with every muscle stretched to its fullest extent.

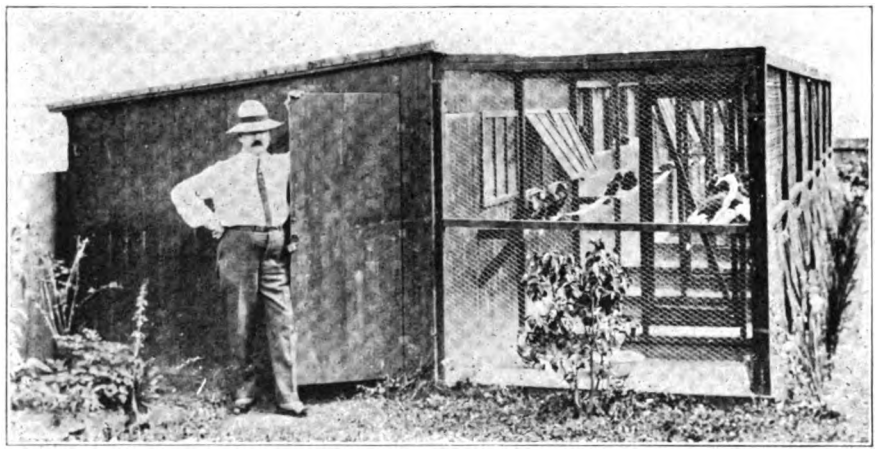
Each coop should have a loose nest box about 8 inches square and 4 inches deep made of ½-inch stuff. The best material is coarse pine saw-dust with tobacco stems for the birds to build with.

A loose perch made of 4 inch by 4 inch by 4 inch block nailed to a small board 6 inch by 10 inch by ½ inch thick to catch the droppings. These perches can be easily taken out and cleaned.

Each pen should have a tin for water and also one for food, hung to the bottom cross baton of the lattice front when building a pigeon house. Try this scheme.



A VIEW OF MR. WAGNER'S POUTER PENS.



A VIEW OF MR. TREGWIN'S LOFTS WITH PROPRIETOR STANDING AT DOOR.

A Jacobin Fancier's Pigeon Loft.

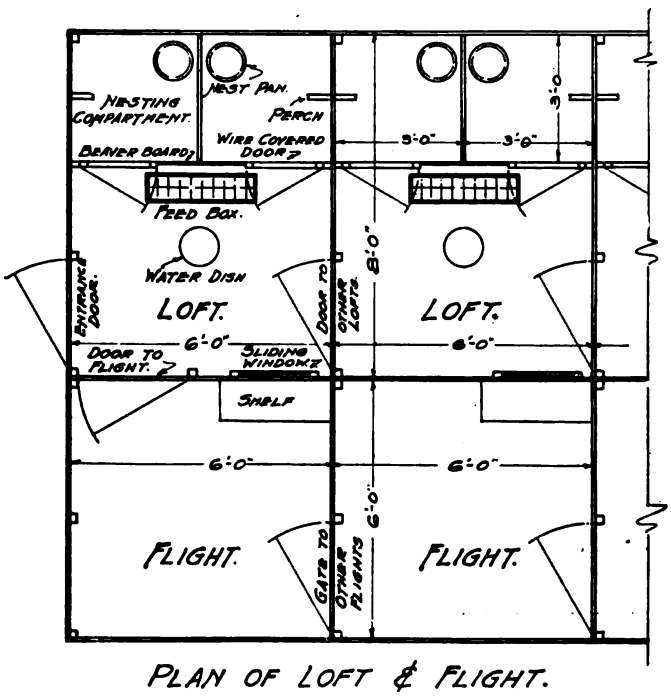
By W. Tregwin.

These lofts, as illustrated, are not by any means elaborate, and are within the reach of any real fancier. I started with just one house, 12 feet by 8 feet floor space, 7 feet high in front, and sloping to 6 feet at the back, inside measurements. Floor raised from the ground 9 inches. The whole made in six sections, and of 1 inch lumber finished both sides, with the exception of the floor and roof, and all tongued and grooved.

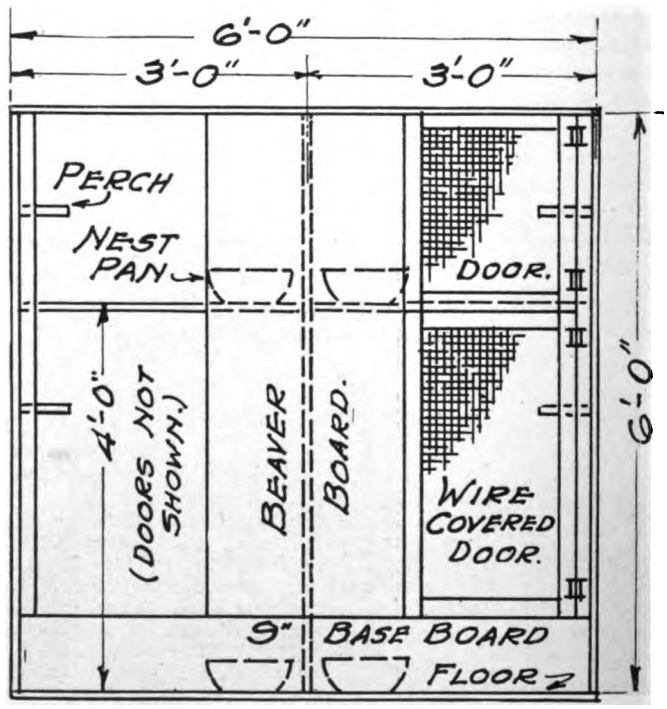
Roof is covered with 3 ply roofing felt, cemented and nailed at joints. The sliding windows across the front are 4 feet from the floor, and open onto a 12 inch shelf running along outside the windows.

The flight to this house is 12 feet by 6 feet and the full height of the house is made of 2 x 2 finished lumber, made in four sections, and these are covered, before erecting, with 1 inch mesh wire netting to keep the sparrows out, with a 9 inch baseboard running all around the base. In this flight are two perches running the full length of the flight, one of which is ten inches from the wire front, and the other is ten inches from the front of the house, so that neither are in your way when working in the flight.

This original loft was divided into four breeding compartments running along the back, each 3 feet wide, and the full height of the house, and they were 4 feet from back to front. Three feet from the floor I had a shelf about 18 inches wide across the back, as some birds prefer to nest other than on the floor. In this first house I kept four pairs of Jacobins, and on alternate days one door was left open so that this one pair could have the full use of the runway, which was 12 feet by 4 feet. This arrangement only held good when the weather was bad and the open flight could not be used, and it gave each pair of birds lots of exercise once every four days. In this runway I kept the bath. If the weather was good enough for letting the birds out into the flight, all the four doors would be left open.

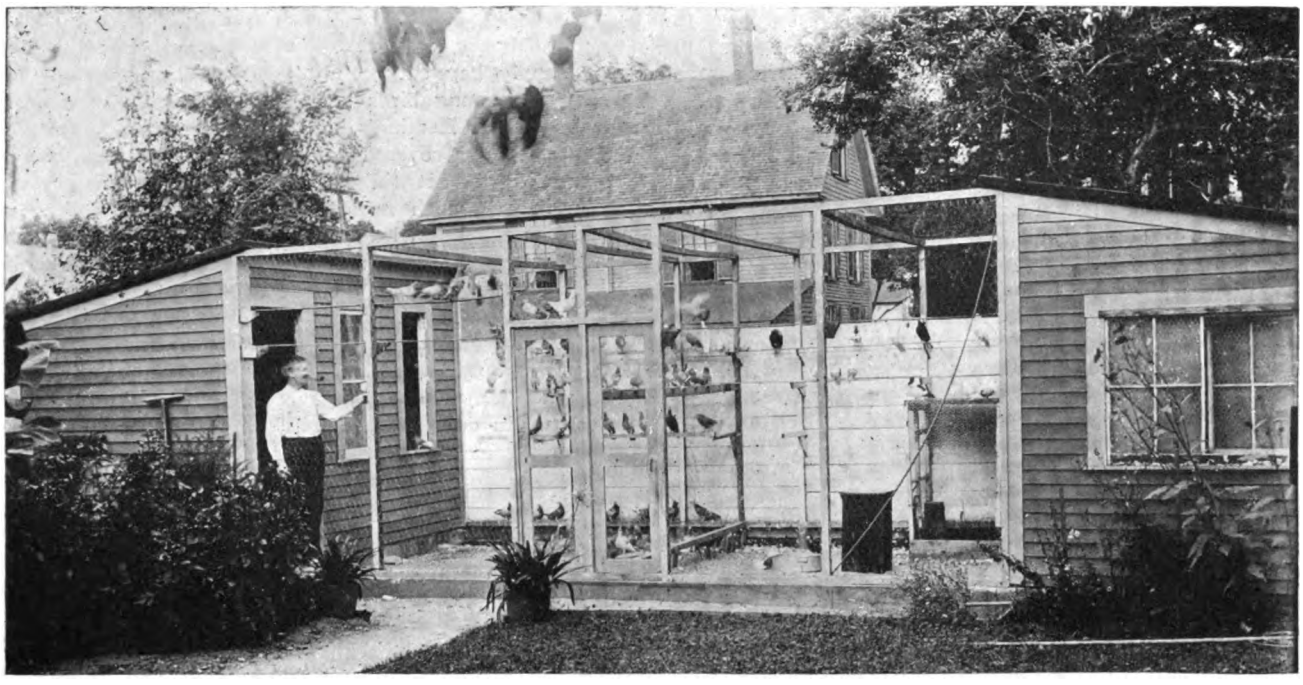


PLAN OF LOFT & FLIGHT.



VIEW OF REAR WALL SHOWING NESTING COMPARTMENTS.

DETAILS OF MR. TREGWIN'S LOFTS. (See text for description.)

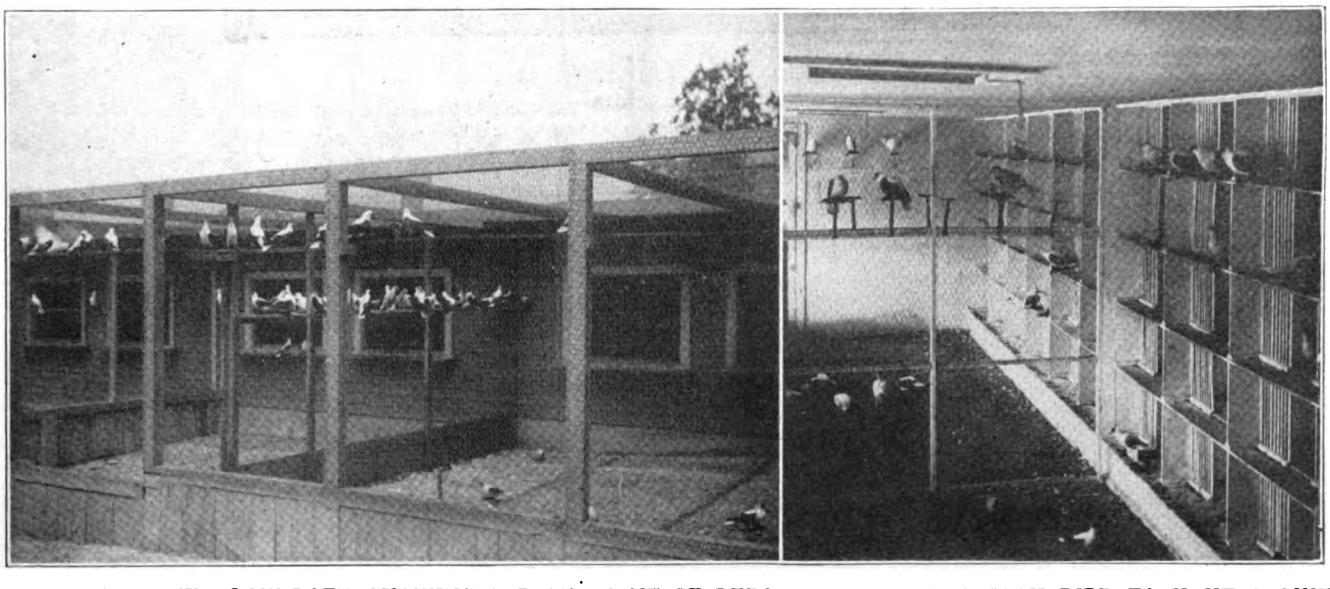


AN OLD ILLUSTRATION OF A FINE PIGEON LOFT, SAID TO BE THAT BELONGING TO MR. GEORGE WATSON, LOWELL, MASSACHUSETTS.

As my stud increased I added two more lofts, one at the north, and one at the south of my original house, so that my first house is now in the center of the long house illustrated. The added houses were each of the same size as the first house, so that my present loft, as here shown, is 36 feet long and 8 feet wide, without the flights. The flight runs the full length of the house, and it is 6 feet wide. This loft faces west, and gets all the afternoon sun. Some may prefer a southern aspect, but I think the birds can get more sun from the west. I have just one door to lock, as the entrance is into the first or north loft, and from this loft I have a door opening into No. 1 flight, and from this flight there are doors running all down the line.

When I added the two houses to the original one I rearranged the interior and did away with the 3 feet by 4 feet compartments, and instead divided the whole loft into six compartments, each 8 feet by 6 feet, with windows opening into six separate flights, each 6 feet by 6 feet. Therefore, each breeding compartment is now 6 feet wide, and 8 feet from back to front. I have a shelf 3 feet wide running across the back, 4 feet from the floor, with a partition in the center, both above and below, thus making four breeding or nesting boxes of good size. The fronts of these are partly covered with beaverboard, giving a certain amount of seclusion that I think the birds appreciate. I have also got detachable wire doors to each of these nesting places, so that I can close up any birds that I wish, or they can be used if you want to keep the birds from using any particular nest. I find this also an advantage when getting birds ready for show, or for separating the sexes at the end of the season.

Each of these nesting boxes is equipped with earthenware nest bowls, also with one perch. Usually I only breed two pairs of Jacobins in one of these houses, and by having the four large nesting compartments there is very little fighting for positions. In any event, these compartments are large enough to shut up any pair of birds until such times that



INTERIOR OF A SWALLOW LOFT, SHOWING ARRANGEMENT OF PERCHES TO ENABLE EACH BIRD TO HAVE A QUIET ROOST FOR ITSELF.

they have eggs, and after that they are fairly safe. I do not believe in overcrowding any variety, especially Jacobins, and I have proved that more fertile eggs are assured than when too many birds are huddled together.

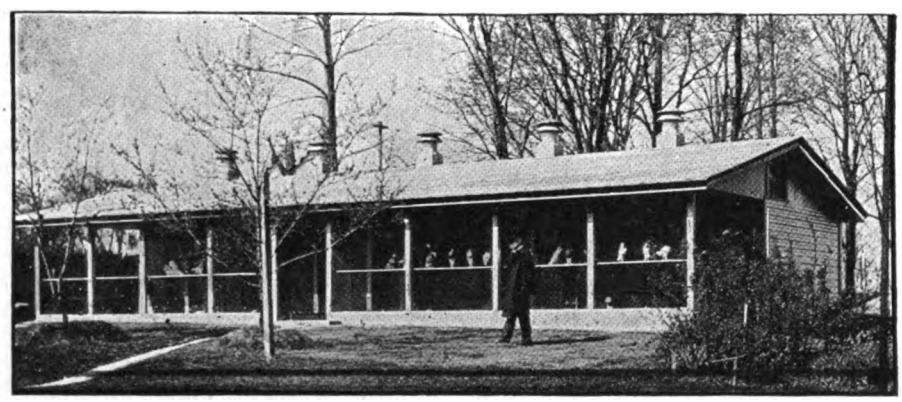
In addition to the large loft illustrated and above described, I have a smaller loft 20 feet by 4 feet 6 inches, divided into three houses of equal size. These are 6 feet high in front, sloping to 4 feet 6 inches at the back. A flight runs the full length of this house, and it is 6 feet wide, with communicating doors as in the other loft. This loft is used for odd birds, and for the youngsters when they are old enough for the nursery. This house faces south, and the young birds get the full benefit of the sun during the period they most need it. This smaller loft is made of 1 inch tongue and grooved lumber, covered top, back, and ends with 3 ply roofing felt, so that there is no possible chance of any drafts.

This is very important, as although Jacobins, and in fact any variety of pigeon can stand any amount of cold, drafts are fatal. I do not believe in any plan of artificial heat for pigeons. It may help in getting early youngsters, but in the end you will have a strain of birds lacking in stamina. Any bird that cannot live through our average Canadian winter in my lofts surely has something wrong with it, and it is better dead. I never had a sick bird, never had a bird with roup, and I am convinced that a fresh air loft is the best in the long run. The loft should be well supplied with perches, and so arranged that the droppings from one bird cannot soil the bird occupying the lower perch. Perches should be small enough so that droppings go clear to the floor, as this helps in keeping your birds clean, especially in the winter time when the birds spend so much time on the perches. I use sawdust on the floor of the houses, in the nest boxes, also in the nest bowls. For the latter I also supply hay cut up into lengths of about four inches. When the young birds begin to appear, dust the nest and the birds with Keating's, or some other good insect powder.

I use circular covered galvanized drinking tins, with wires around to prevent the birds using the drinking water to bathe in. In each flight, when weather permits, I use a large enameled bowl for the birds to bathe in. Once or twice during the season I dig up the ground in the flights, otherwise the droppings cause the ground to mildew, and turning the ground over gets rid of all that.

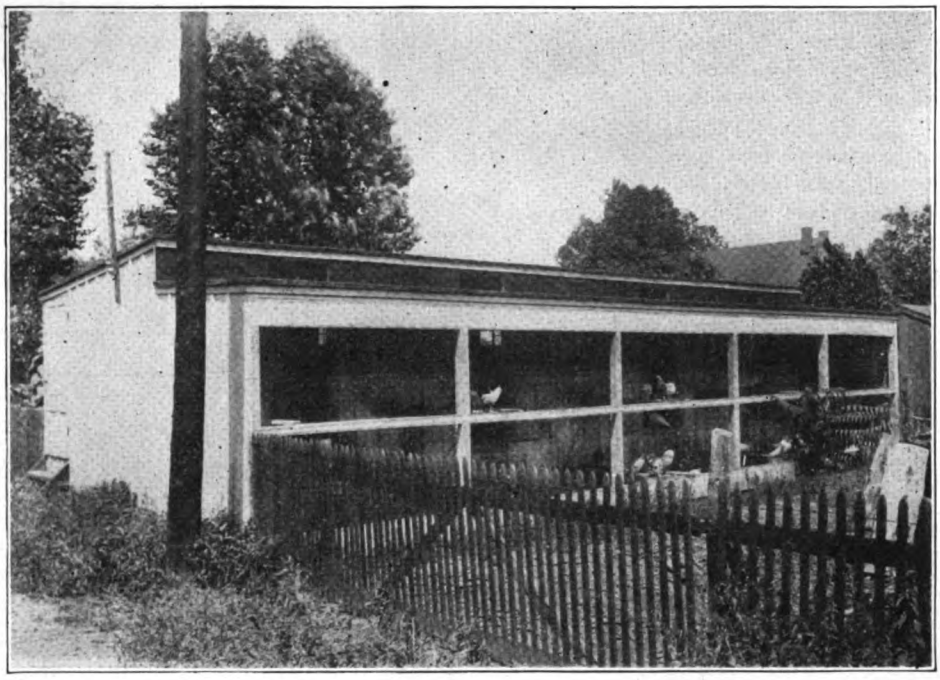
I have heard many arguments for and against brick lofts, but unless they are artificially heated I do not know of one case where any fancier has successfully raised fancy pigeons in them. In cold weather a brick place is as cold or colder than a wooden house. A wooden house will warm up just as soon as the sun hits it, but this does not happen with a brick house once the brickwork has got thoroughly chilled.

With a loft built of wood as herein described the roof gets the morning sun, and some parts of the house get it all the time, and it soon warms up. Not so a brick house. Here in Canada we have the real thing in cold weather, yet, if you look over the reports of the Jacobin Club shows, the premier honors have gone to Canadian Bred Birds. The Jacobin is what is known as a long feathered bird, and some breeders claim that heat will increase the length of the feather. Let those believe it who may. These winning birds were bred and raised in houses similar to those herein described, with no heat except what Nature supplied, and many of these same birds were not properly moulted out at the December show.



L. SIMONTON'S POUTER AVIARY.

In regard to this house, Mr. Simonton says: "This loft is 50 feet long, divided into five divisions, as follows: In the center a pen room 9 feet wide, 13-2 feet deep, entered from a passage 4 feet wide between 4 flights each 11-2 feet wide by 12 deep. There are four breeding rooms, 2-12-2 by 13-2 and 2-8-2 by 13-2. One of these latter is reserved for Homer feeders; this leaves 3 rooms for Pouters. I have another large loft for Homer feeders and of these I keep from 30 to 35 pairs. In the 4 Pouter lofts I have nesting places for 58 pairs, although from 25 to 35 pairs are all that I usually match up. Each pen is 2-2 feet long by 15 inches deep, divided into 2 compartments, 15 inches each. One section is closed except an entrance from the open part in order that birds on nest may not be disturbed. This section, however, has a door for observation purposes. The other section is open for entrance, but can be closed with a lattice door if necessary so that birds may become familiarized with their new quarters."



A VIEW OF MR. OSWALD'S RUNT LOFT. (See text.)

Runt Housing and Breeding Suggestions.

By Dan Oswald.

A question I have been asked often is: Is it necessary to have individual coops to raise Runts? To all who ask this I reply that it is not. While the individual coop has advantages in the breeding of any fancy variety of pigeon, and while we have some, we are also getting good results in our unit system.

I have been in the pigeon business for many years and each time I build a loft I try to make some improvements. Last year, when Mr. Dunston and I formed a partnership, we needed more room and had to build to accommodate the birds. I will try to explain this latest pigeon house of mine.

The pen windows face south and the building is 30 inches above the ground to prevent rats from making their home below. The breeding pens are 10x10 feet, with 3-foot hallway an the north side of the building. In this hallway we keep all the feed, grit, etc. The roof on the south side is 7½ feet from the floor and has 1-foot pitch to the north, leaving 6½-foot space in the passageway. The entrance is at the west end and a door leads into each pen.

On the north side we have a window 36x30 inches in line with a 5½x3-foot door which leads into each pen and above it a transom window, which works on a slide 14x36 inches. I find this window very good for ventilating and controlling the temperature in both warm and cold weather. I find this loft much cooler in warm weather than other lofts that do not have this transom window. I only open the north windows in extreme hot weather, as drafts must be avoided. By locating this north window and the door on the south side of the house so they are in the middle of each unit and the nests on the partition sides, air circulates to good advantage and very little draft hits the nesting places, as it has a straight shoot through.

By all means do not let a draft get to the young birds in the nests or trouble will follow. Our nests are built 15x15 inches by 1 foot high, 4 high on each partition side and above the nests 1-inch wire mesh to the roof to keep each unit separate.

The proper nesting arrangement is something which has given squab and fancy pigeon breeders something to study over. I close with heavy cardboard every other nest. When a nest is closed in one unit it is opened in the other. This leaves no two adjoining nests open in the same unit. By this plan no one bird will try to control a whole row of nests and it gives 24 working nests to each unit. We keep twelve pair in each unit which gives each pair two nests, which they should have. When they have not enough nests they will try to lay in the nest occupied by their squabs and the eggs get broken when they feed their squabs.

We place a 2x4 the length of the nest in front of each nest to keep nesting material and eggs from falling out, and furnish the birds with tobacco stems and timothy hay for nest material. This is placed in a box where the birds can have access to it at all times.

They have plenty of bathing water in summer and none at all in winter. Now and then we give a tonic, of which there are many, but this is practically all we do for them. Of course we keep the place clean and after each cleaning we use plenty of lime.

The fly-pen is not built as large as some of the old time pigeon breeders may like. Ours is six feet long and has a roof over the top. The sides are closed and only the front is open. The front we have covered with one-inch wire wesh, the small mesh is used to keep the sparrows out, as feed is too high to feed to sparrows.

The roof over the fly-pen and the side covering is to better protect the birds from the cold rains, strong winds and the even worse snow in winter. We have noticed the difference in the health of the birds in these pens, as compared with those in open fly-pens and are so convinced of the merits of this method that we are going to close up the other pens also.

Some may object that there is not enough sunlight. But, in the winter months when they need the sun, they get it as the sun slants more in the short days and they get all they need in the longer days of summer.

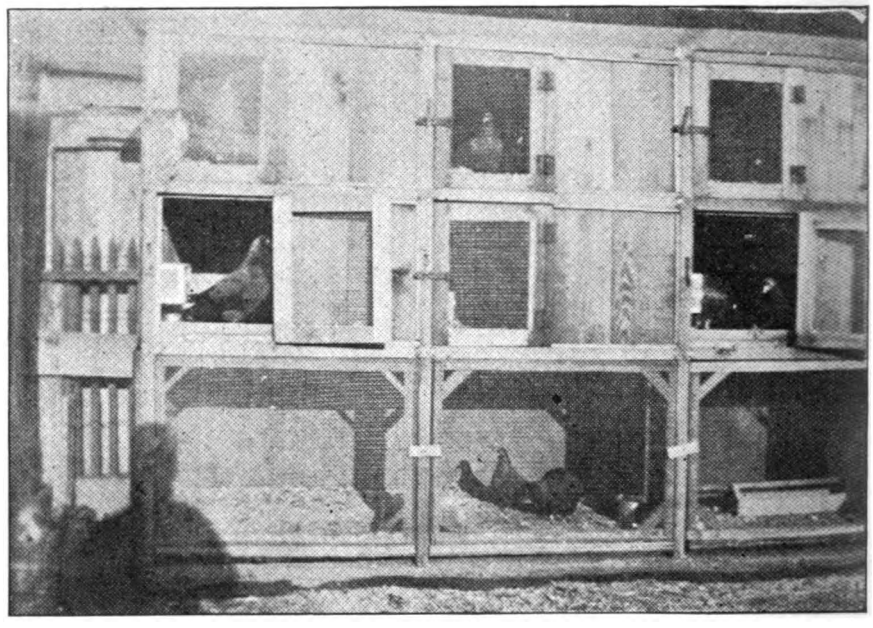
We fed as much as 50 per cent whole corn in the winter

months and none at all in the summer, as it is too heating in warm weather. We feed, besides this, the commercially prepared pigeon feed and also keep grit before the birds all the time.

The thermos water fountain is used and has proven very practical, as it keeps the water nice and cool in summer, which is a large factor in keeping birds well. Our experience is that stale water will throw birds out of condition as quickly as anything. The water fountains also save a lot of work in winter as they are not easily frozen, and it takes real zero weather to affect them.

We have tried hopper feeders, and, while they are useful, we find that there are some of the mixed grains which the birds like better than others, and the grains they slight accumulate at the bottom and are wasted.

Those who will follow the lines I have tried to lay down and will get good stock can raise good Runts without having individual coops.



RUNT BREEDING PENS IN MR. SUANDER'S RUNT LOFT.

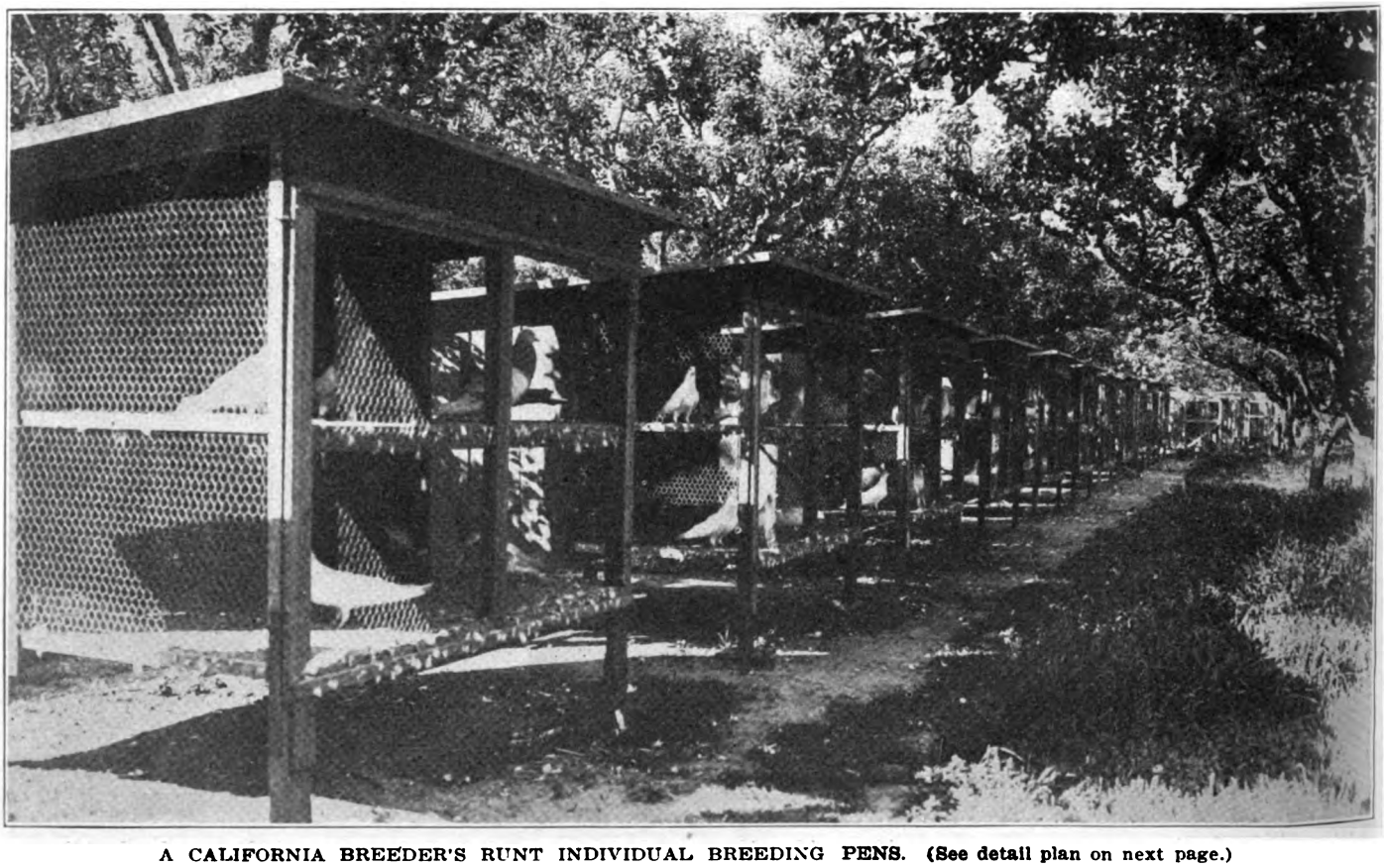
A California Runt Pigeon Breeding Loft.

As most of our readers are aware, the climate of California is particularly favorable to the production of fine pigeons, and the breeders of the Runt, our largest pigeons, find the mild climate is particularly advantageous.

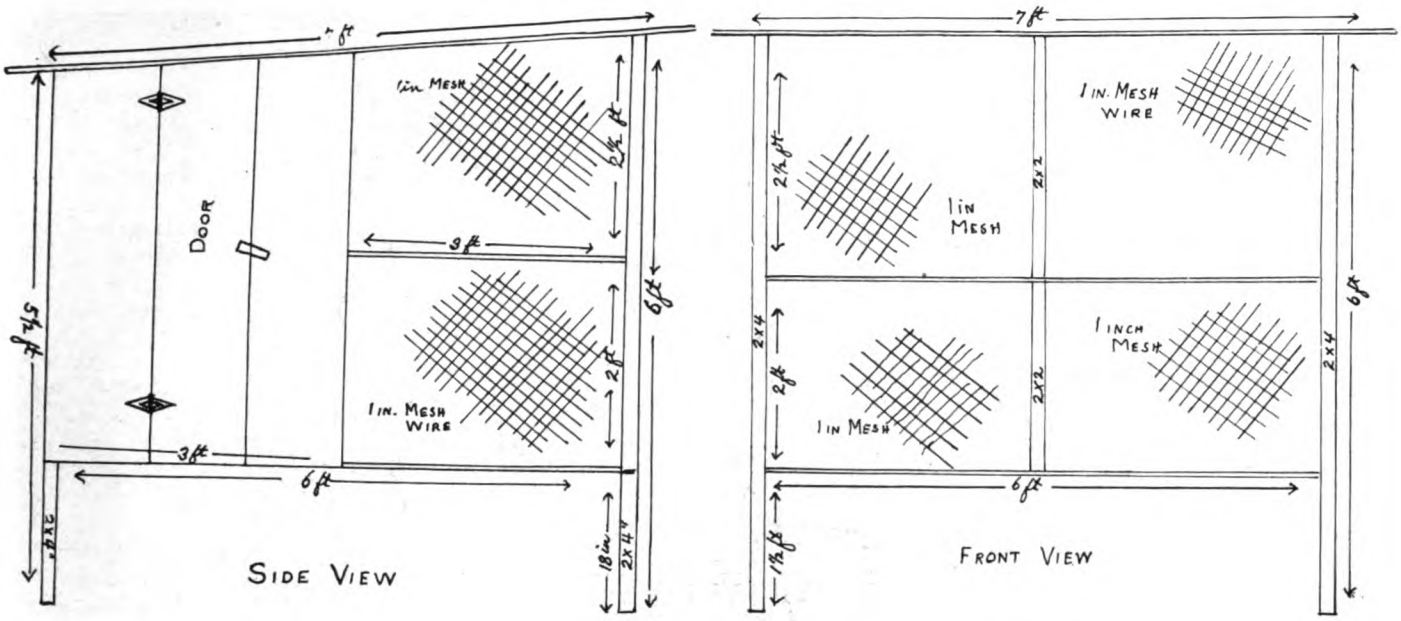
One of these breeders is Mr. Curry, located about fourteen miles south of San Francisco, and we show herewith two plates, one showing the individual lofts under the trees and the other outline giving the details.

As is well known to the breeders of this variety of pigeons, they are rather quarrelsome in a small loft and are also called "slow" in their mating operations, hence it has been found to be of advantage to give them individual pens, and these pictures show how Mr. Curry has given his birds fine quarters under the shade of his fruit trees.

It occurs to us that this system, while well adapted to California, would have the disadvantage of requiring considerable work to keep these numerous lofts clean, and as labor means expense, this, in our estimation, is the biggest handicap. Of course, in other localities such houses could be room in a larger or continuous house, and such a con-



A CALIFORNIA BREEDER'S RUNT INDIVIDUAL BREEDING PENS. (See detail plan on next page.)



DETAILS OF CALIFORNIA INDIVIDUAL RUNT BREEDING PEN

struction would save half the number of sides. This, however, is simply a thought that comes to the editor and is here presented to set intending builders of Runt houses thinking of plans by which they might overcome their difficulties.

The specifications of these individual houses are as follows:

Roof: 1x12 boards, covered with roofing paper which overlaps the sides, back and front, by 6 inches.

Floors: Tongue and grooved.

Legs: 2x4 scantling with 2x2-inch cross braces.

Back: 1x12 boards with the cracks covered with battons.

Sides: Three 1x12 boards, the center board serving as a door for feeding, watering and getting at the nests and squabs. The other three feet of the side (front) being covered with 1-inch wire mesh woven wire.

Center partitions: Same as side, only no door; boarded 3 feet and wire 3 feet.

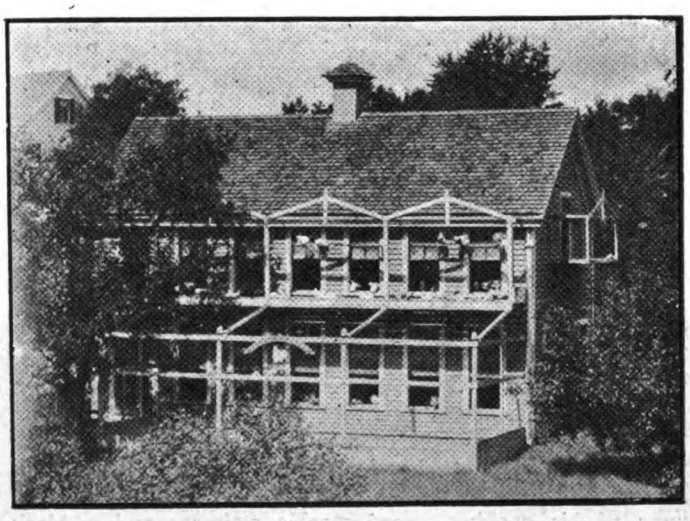
Front: All 1-inch woven wire. The entire front opens as one door for cleaning purposes and for catching birds. If desired, two or four individual doors could be made.

Nests: Nest frames are set opposite side door and are 15x15 inches, 12 inches high and covered with boards, which makes a roosting place for the birds. These frames are built against the center partition so that when you open the door you can look right into the nests, and they are built on the floor alongside each other. Into these frames are set the light boxes, 14x14 inches and 3 inches high, and which can be taken out to be cleaned and disinfected.

A Visit to Jesse M. Rutter's Fantail Lofts.

By George Feather, in Pigeons & Pigeon Flying.

The lofts are situated in the rear of the residence, like most other lofts, and is a large and substantial building nicely sheathed and finished inside and out. This building is 30 feet by 15 feet, two stories high and with a southern aspect. Downstairs contains two pens, each 12 by 15 feet,

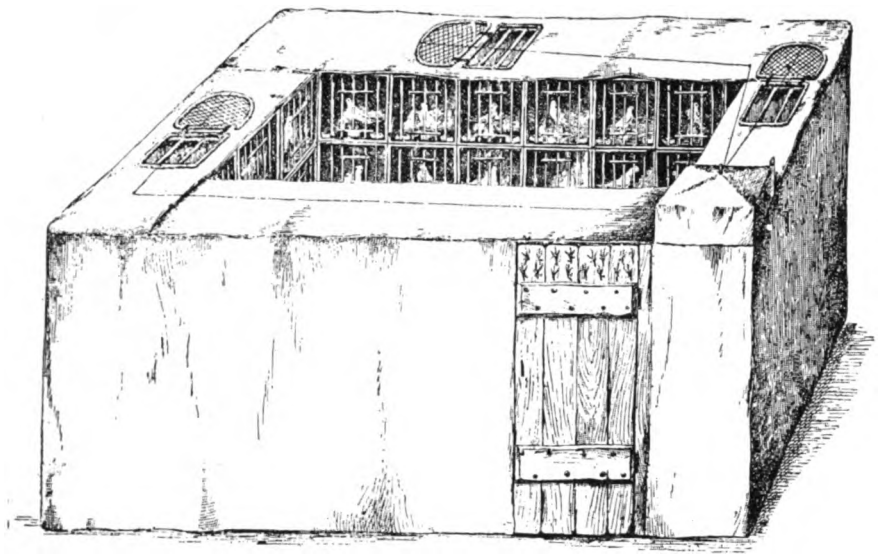


JESSE M. RUTTER'S FANTAIL LOFT.

with a hallway 6 feet wide containing the feed bins and two pens 8 feet by 2½ feet, used for single pair breeding.

Upstairs is divided into three pens, each 8 feet by 15 feet with a hallway six feet wide by 15 feet, which also contains the feed bins, one individual breeding pen, three mating cages, a closet for medicine, cleaning tools, etc., also the books containing the records which, by the way, shows the breeding of every Fantail from the commencement of this strain down to the present time.

The illustration does not show the entrance to the loft, as it is at the west side of the fly-pen in front. The large ventilator on top, together with the windows on the ends gives a free circulation of fresh air at all times, and the large windows shown in front, give ample sunlight which gives the loft a very pleasant appearance within.



AN EGYPTIAN FLYING PIGEON LOFT.

AN ARABS PIGEONS AND PIGEON HOUSE

I WILL first give you an account of my experience with one of the Egyptian pilots, Mahomet Effendie, who had piloted my boat through the pass into the harbor of Alexandria, Egypt. We were moored inside the harbor and the Mahomet was smoking one of my cigars, when, looking around the bridge deck, he spied two Homing pigeons in a coop.

After looking at them for a time he said: "What pigeons are those, Captain?" I replied that they were "Carrier" pigeons. Then I had to explain how they were trained and what they would do. One of the birds had won a race and had quite a reputation.

So when this was explained he exclaimed: "Mushalla!" ("My God") and apologized for using the sacred name.

Well, the old fellow had a cup of black coffee and just before going down the gangway he invited me to his house to see his pigeons on the following day at 6 p. m.

At that hour I arrived at Mahomet Effendie's house, which was close to the Ras-el-ten. It was the usual house for a man of his position—broad marble staircase and a black servant at the door. The nigger smiled and said "Captain." He had evidently been told of my intended visit. At the top of the staircase Mahomet Effendie met me with a quiet smile and the words "en-ar-excide," which means "good day." He then turned to take me along the passage and in doing so clapped his hands twice, never saying why he did it or what he did it for, but it was for his women of the harem to get out of the reception room. We were soon in the saloon, a room about 40x25 feet, with Turkish rugs all over and what we call "Chesterfields" all around it. I was waived to a seat, when in came a black servant carrying a silver tray with coffee and cigarettes—not the muck they call coffee in England, but real Mocha, every bean picked and roasted to a beautiful brown. After smoking two or three cigarettes and drinking the coffee I was invited to see the pigeons.

We went to the roof of the house (they are all flat out in Egypt) and pigeon houses consisted of a rectangle of coops made of basket material about two feet and six inches square with slatted front, to which was fixed a red clay drinking pot and another similar pot for the feed. And, ye gods! a pot stand just like you see in English lofts for the Pouters to stand on. They have these and the drinking and feeding pots, nest pans, etc., since the time of the Paroah, for you can see them in the museum at Cairo. Really, there seems "nothing new under the sun."

To go back to a description of the pigeon house, or, as I should say, pile of cages, for these coops were so piled as to form a square about four pens high, and in one corner a standing place for the owner. As these pens are all open, matting is placed around outside so as to keep the wind off the birds. Rain you need not bother much about as you only get it in December and January. There is also matting over the tops of the coops, and, would you believe it, three traps on top, something like those I have seen in the mining districts of England in my early days.

These traps are made of net on a bow-shaped piece of wood. The sketch accompanying this article will give the reader some idea of what they are like. I must not forget to state that in the corner where the door (which is generally of wood) is there is a stool on which the attendant stands to control these traps. This part is a little higher than the rest and there are spy holes through the sides of the covering so the owner is concealed from the view of the flying pigeons and also through the sides of this covering there are strings passing to the traps so he can close them at his wish. Now follow me, you racing pigeon men, who think there is no other flying sport but yours on earth! My friend, the pilot, unlocks the door and in we sail. I look around and in each pen see one bird, with the exception of about seven pens; in these there are pairs mated up and breeding; some have eggs, others have young. The single birds are all standing on the pot "pouter" stand. They are all "Swifts" excepting one pair of Oriental Rollers. The latter are white-eyed, eighteen feathers in the cock's tail and fourteen in the hen's, with nice hollow backs.

My friend said something to the black servant and unfurled a red flag. I thought: What's this pirate flag for; have we got any on board? The pilot explained that they always put up a red flag at the corner of the pigeon house and so did all of his friends before they liberated their pigeons, and when the birds were to be dropped the flag was taken down. The black servant put up the red flag and Mahomet opened the slide doors of about fifty of the coops and out flew fifty Swift cocks, almond colored, blue, black and white, bronze, yellow and powdered silver. The latter I thought the prettiest of all.

The birds got up well with the Oriental Roller above. What a sight it was! The sun was half an hour from setting and not a cloud was in sight. The cock Roller, like a speck in the sky, dropped down 300 feet or more, right into the flock of Swifts, not tumbling, but like a football, and in his flight part of the wings struck above the ball. How the bird ever recovered himself was a mystery to me.

Now my attention was drawn by my friend, the pilot, who showed me flag after flag going up from many house-tops and flock after flock arose in the air. When they all got up they formed one mighty flock of pigeons just as though they had all been turned out from one loft. I counted about ten Oriental Rollers and these seemed to be trying to outdo one another, but my host's bird was La Primo, as the old pilot said.

We are now setting down upon the house-top. Coffee and cigars were brought again. There was a nice mother of pearl stand to put your cup upon. The sun was getting lower in the west, and, as you know, near the tropics there is little twilight, so I began wondering when my friend would begin to drop the birds.

Just then my eye caught sight of rows upon rows of pigeon feet that were attached to the door of the pigeon coops. I inquired what they meant and was told to wait a bit. Again, my eyes turned to the flock of several hundred pigeons in the air. How were they going to break? The Rollers were now getting very low. They had been flying about 45 minutes.

I saw the colored servant going to lower the flag. There was only a little light left. Down came the flag and the first bird to drop was the Roller. The servant takes his place on the stool in the corner and gathers up the trap strings. In a moment there is a rush over our very heads that shuts out the light. Not a move is made by us and the birds swing around the coop again. This time the top of the pigeon house is half covered with birds; in a moment more they are around again and twenty more birds drop, but they are off again, making another lower circle, just above the house-tops.

Now I see the bow shaped tops of the traps are turning over. You hear a slight flutter but cannot see any bird under. Where has he gone? All the pilot's birds have entered their respective pens, nearly. It might be broad daylight, the way these Swifts fly to their pens, take a drink and onto their stands they get.

Gradually the top of the house is cleared of birds, and all is quiet again except for some cooing and some fighting.

I am now invited into the enclosure and what a sight I see. Three pens under the trap are half full of birds. It seems that the traps are so drawn over a bird, it is so formed, that it drops like a trap door over the bird, and when released it flies back ready to be sprung again, but is so arranged that the captive bird cannot escape. In all, they had trapped eleven birds and lost only one of theirs, which, I was told, was a young one. These eleven birds were all killed, and one foot being cut off each to be added to the trophies upon the wooden door.

The old pilot begged me to accept a pair of powdered swifts, which I did, and his man brought them to me on board the day we sailed for England.

Trumpeters.

Their Housing and Management.

By D. S. Scott (Hon. Sec. of the British Trumpeter Club).

Trumpeters do not require an elaborate range of lofts. The first essential point is: Perfect freedom from damp and draughts. I do not mean the loft should only be dry, but so constructed that there is no possibility of the birds drawing damp from the floor by the heat of their bodies. This means that the floor should be well clear of the ground, with a free current of air below. If the ground below the floor can be cemented so much the better.

Trumpeters require a bit of floor space, but neither perches nor elaborate nest boxes. A loft, ten feet long by six feet or eight feet wide will give ample room for three or four breeding pairs. All that is required in the way of nest boxes are two pieces of wood about eighteen inches long by one foot wide nailed together at right angles, with another piece about a foot wide, nailed across the top to stiffen and also shut out the light. Trumpeters dearly love a dark corner to do their courting in. These "boxes" placed in the corners or along the sides of the loft, with one edge kept back from the wall to form an opening, and a large nest pan inside are

I have tried all ways of keeping and breeding Trumpeters —in pens, in lofts with flights, and in lofts without flights. Mine have been altered many times, and my opinion is that a loft without a flight is the best. I may be wrong but it served well with me, and if ever I take up Trumpeters again I shall follow the same plan. I very rarely had a sick bird. Accompanying this article there are rough plans of my loft. It can be improved upon, but it was the best I could do with the available space. After the breeding season such a loft will accommodate at least a dozen Trumpeters, if the birds are moulted together. In the plan I have left out the netting on the feeder's flight, also nest boxes in the loft in elevation plan. There were three tiers of double nest boxes, with movable fronts—fifteen double nests in all, also box perches in all available spaces for thirty odd birds. The floor of the feeder's loft and flight was cemented. There were boards three feet high, then netting between the loft and the passage. The divisions in the Trumpeter lofts were about eighteen inches wood, two and one-half feet canvas, and the netting to the roof. Between the lofts and passage there was eighteen inches wood, then netting to the roof. Of course, there was netting inside all the windows. I might add that the feeders were in the main loft, which was twenty-four feet by fourteen feet, flights included. Each bird had his own block of wood —about four and one-half inches square with the corners taken off. A bird would select his own and keep it throughout the season. A block should be provided for each bird, no more, no less. This reduces fighting, and also makes the cleaning a simple matter, as the droppings are mostly around the blocks. It has also another very great advantage, viz., a bird which is not up to the mark and is not digesting its food properly can be spotted at once by means of the grain vomited up—Trumpeters are grand at vomiting—and the condition of the droppings, and taken in hand before inflammation sets in.

Keep the same birds in each loft after moulting if possible, for if a stranger is put in, there is sure to be a free fight for

a day or two, with broken footings and scanty shells as a result. I have heard it said that the blocks were apt to break their footings, but I never found it so. It rather kept them clean and in good order, but the blocks must be properly placed, not thrown down anyhow. About fifteen inches from the walls, and eighteen inches apart will be found a very suitable arrangement. They should be placed along the back and sides of the loft, cocks and hens to be kept separate in the non-breeding season.

I prefer to keep Trumpeters by themselves but I have bred other varieties amongst them, principally Jacobins and Fairy Swallows, and with suitable perches and nest boxes they did very well.

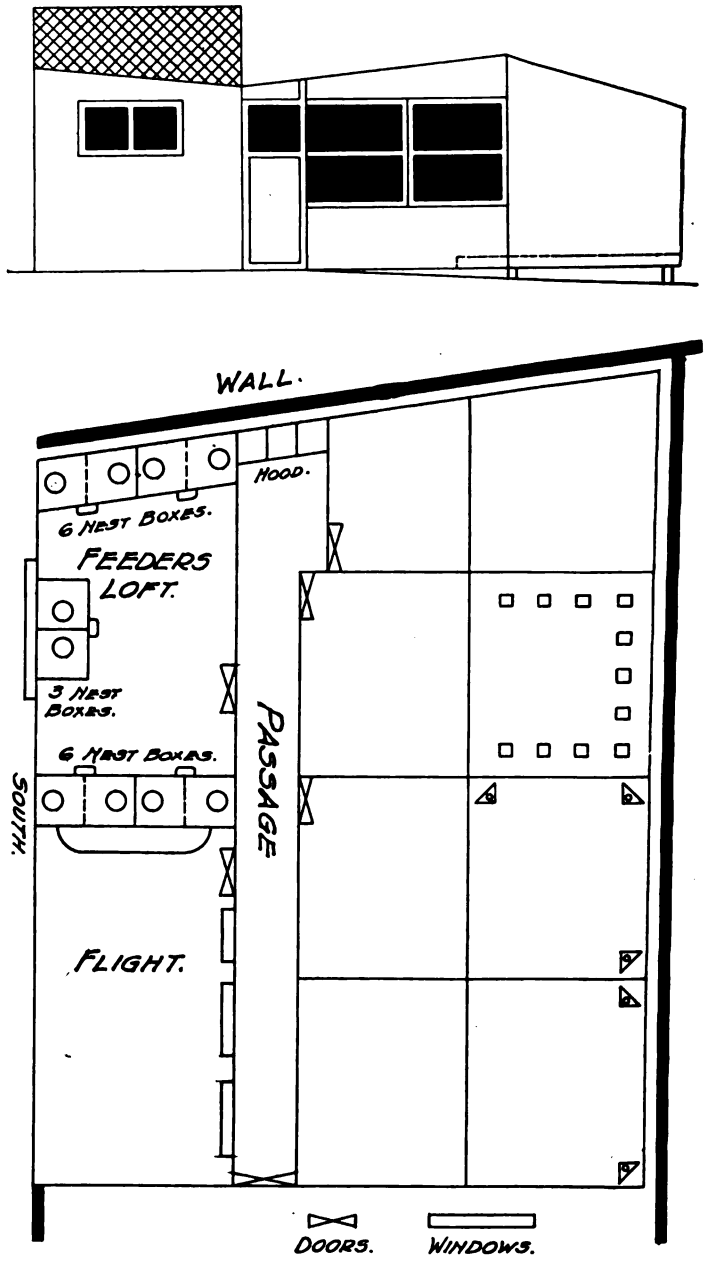
The loft does not require to be warm. Trumpeters can stand any amount of cold. Mine was made with one and one-eighth inch flooring boards for back and floor, three-quarters in tongued boards for one end. The other end and front were boarded up for three feet with the same; wire netting above that, with windows which folded down over the boarded part; roof three-quarters inch boards, covered with felt and galvanized iron; two roof lights. The water in the fountains froze solid if left over-night in winter. Towards the back of the loft there was a raised floor about four inches above the main floor. This was covered three inches deep with sawdust, or fine shell gravel mixed. In this part the birds roosted at night. The remainder of the floor was covered with shell gravel, and on this the birds were fed and watered. My total floor space was about twenty-four feet by thirty-two feet. This was divided into four Trumpeter lofts, a passage along the front, and a feeder's loft and flight outside of this, and at different times has contained sixty to seventy Trumpeters and thirty feeders.

General Management.

There is nothing very different in the management of Trumpeters to that of other varieties, except that on no account must they be overfed. If overfed, they do not take exercise, and trouble is sure to follow. Overfeeding kills ninety out of every hundred Trumpeters that die. My birds were usually in good, plump condition, and very likely ate more food than those which were overfed, simply because they took much more exercise and needed the grain. They require a very moderate feed in the morning, less than they would eat to fill themselves full up and cause them to take their blocks for the best part of the day.

Feed from boxes. A cigar box will do, if the fancier cannot make anything better, but I prefer a long narrow box so that all the birds may get to it at once. They will scatter a lot of the food on the shell gravel before mentioned. Picking this up will keep them amused for a long time. At the same time, they will pick up a good deal of shells or grit, which shows the great value of the shell gravel from the seashore. I never yet saw a Trumpeter go to the grit box and have a fill. I have tried all sorts and never saw one eat grit by itself. The only way is to mix it with the food, when they will be sure to get some. With this moderate feed in the morning, by 3 to 5 p. m., in the afternoon, according to the season, they will be as lively as can be and not dosing on their blocks.

I do not care for a heavy feed of maples in the evening, especially in winter, but prefer a good portion to be smaller grain, tares and wheat, no dari. Maples swell very much, and if a bird's digestive organs are not at their best the peas may not pass out off the crop and the bird will vomit to relieve itself. This is where the individual blocks come in. When grain is seen round a block in the morning, the bird which belongs to this perch should be handled at once, when it will more than likely be found with an almost full crop. Now is the time to take it in hand. Then at once, and allow it no grain until its crop is empty. I cannot very well recommend individual medicines, or the readers will think I have some axe to grind. For years I only used one kind, and it was the only one that really ever did much good, so the reader must use his own judgment according to the circumstances, state of the droppings, inflammation, etc., but he cannot go wrong in giving the bird nothing but boiled milk, with a little lime water in it to drink. This will serve both as food and drink. It will make them in a beastly mess, and so I advise the clipping of the rose quite close. It will prevent their being exhibited until the next moult, but may save the bird's



ELEVATION VIEW AND GROUND PLAN OF AN ENGLISH TRUMPETER LOFT.

life, which is the first consideration. I have brought birds back from skin and bone to their usual health, feeding on nothing but milk for a few weeks, followed by biscuit foods, as they get stronger. When feeding in the morning, if all the birds do not come to the food, the absent ones should be spotted and examined, as this is the time when a bird not just

fit should be taken in hand. If in good health they should have empty crops and be quite ready for their food.

In summer, plenty of fresh air should be given, the windows on one side being left open day and night. Close them in winter but on no account make the loft stuffy. Give a bath often in warm weather (they are very fond of it) but seldom in winter, as there is so much undercover on their bodies and if it once gets properly wet it takes a very long time to dry in damp weather and the bird is apt to contract a chill.

The droppings should be swept up round the blocks every morning—a few minutes does it—and the lofts given a good cleaning once a week.

Washing.

I expect this will be dangerous ground, as I know many object to it, principally, I expect, because they do not know how to do it properly. By washing I do not mean a sponge over with perhaps some color improving medium, but a good honest tub with soap and water right in to the skin. A little Jeyes Fluid or quassi chips in the water will help to kill any lice. A clean Trumpeter is worth looking at. A filthy one is an abomination. The wash cleans out all the dirt, and if properly carried out, the feather finishes up nicely, and, last but not least, it improves the health and well-being of the bird. There is no difficulty about it. Melted soap, plenty of warm water, a few towels, a piece of netting around the fire, a few newspapers spread on the hearth, a block for each bird—it is as easy as writing it. The birds will sit on the blocks until they are dry. It may be necessary to shift them now and again, as some will sit with one side to the fire all the time. When they are dry, offer them a drink, put them in hampers in which is some chopped straw, or similar substance has been placed. Keep them there all night, and return to the loft in the morning. Many an evening have I had half a dozen of them before my dining room fire. If the birds are to be exhibited, it is best to wash them a few days before the show as that will bring out the bloom again. It is not necessary to wash them often, but whether for show or not, I think it does them good to get a "tub" once or twice during the winter when they might not be able to take a bath in the coop. —PIGEONS. (English.)

Tippler and Roller Houses.

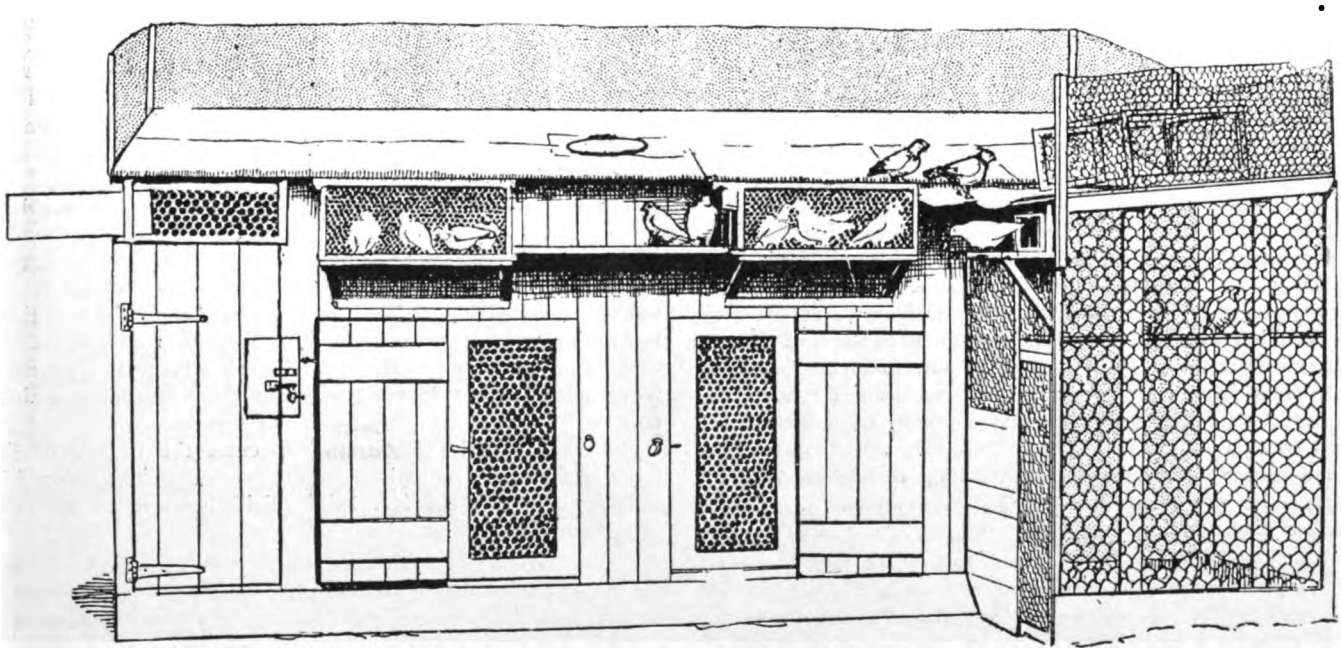
Tippler Flying and Performing Roller, or Tumbling Pigeon, Flying has not progressed as rapidly in this country as has the Racing Pigeon and some of the other varieties. This is in a large part due, no doubt, to the crowded condition of our people in our cities. But, if any Tippler or Roller enthusiast will examine the picture of the Steffen Lofts, in connection with the Racing Pigeon Houses, and which is located on top of a three story house in Chicago; and then read the story about the Arab's Pigeons, published elsewhere in this book, he will see what a wonderful chance there is in Chicago or other large city for prosecuting the sport of Tippler or Roller flying.

Of those lofts we have visited, very few have special facilities and one, of which we know, is located in the room of a third story in a house and the pigeons' entrance and exit is through a partly raised window. This opening is visible from the window of the room in which the Chicago Pigeon Club holds its annual show and while in attendance there we have seen the birds sent up on their morning spin.

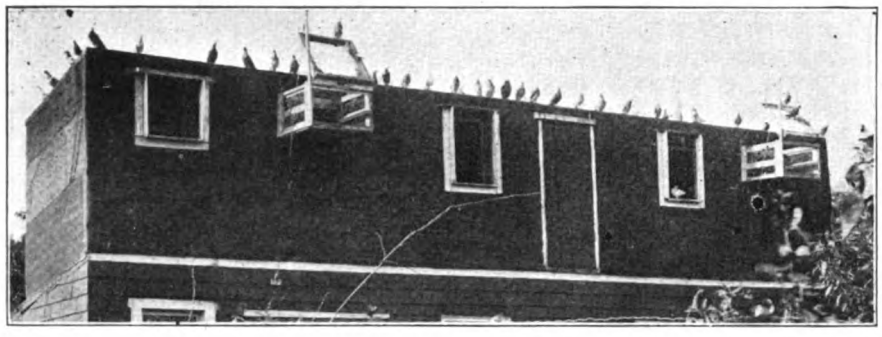
Such facilities, however, do not give the birds a proper chance as all the flock have to be flown at one time, or the birds have to be caught by hand and liberated singly. There are many advantages in having your kit by themselves so when being liberated. For such purposes, our English cousins, have made some progress. In fact this sport of pigeon flying is of very ancient origin in that country and the Spitalfield's weavers are supposed to have been among the first to engage in it. Our understanding is that their favorite plan was a "Dormer opening" in the roof of their homes through which the owner could emerge and enjoy the movements of his birds. Of course, there were smaller exits for the pigeons.

But, as times progressed, the tendency has been to get these away from the dwellings and locate them in the rear of the lot, where they would be away from any shade trees or other projections.

In general, the facilities as described for the Racing Loft, would be suitable for the Tippler flyer, only the latter is in-



ELEVATION VIEW OF A LOFT FOR FLYING TIPPLERS. (From Feathered World's Book on this breed.)



AN AMERICAN TIPPLER LOFT ON LONG ISLAND.

clined to keep his birds in smaller flocks—four to six birds being considered a kit.

As a sample of what we consider a serviceable style of house for such variety of pigeons, we give herewith an illustration of a Tippler house taken from the book on this variety published by the Feathered World of England. This book has other illustrations of such houses, but this one seems to fulfill the needs and is quite simple in its arrangement and description.

The loft is located at the end of the garden lot about 45 feet from the rear of the home. It is 16 feet long, 6 feet 6 inches wide, 8 feet high at the back and 6 feet 6 inches high in front. It has a small window at each end, 14 inches square, wired on the inside and a door on the outside. This house is built of matched lumber and is divided into four sections by three center partitions. These partitions do not reach the top by 9 inches, and this opening is covered with woven wire to prevent the pigeons passing from one section to another, and this allows a free circulation of air from one room to another.

The two outer partitions have a wired window in each, 18 inches long and 9 inches wide, with doors to close when desired. This is also to assist in the circulation of air. Each of the four sections have a front door. Those on the two center sections are covered entirely with wire, while those for the end sections are made of lumber; but the latter have a wire covered air exit above and this, as will be seen in the illustration, can be closed with a slide shutter.

In two of the sections there is erected twenty cages, size 12 by 12 inches and these are for training pens, they also have outside observation cages, or letting out cages as shown and the openings between these cages and the loft is covered by three "bolting wires" which are held closed by an iron rod, when it is necessary to lock the loft against cats or other vermin.

The breeding loft measures 5 feet 3 inches wide by 6 feet 6 inches long. Attached to this is a wire flight six feet square on the ground and the same height as the loft as shown. The breeding-nest pens are located against the wall at the rear, or the high part of the building. They measure 2 feet 10 inches in length, 15 inches in width and 15 inches in depth, with wire doors to open and shut as desired. Each has also a feed trough to encourage the young to pick up early. Next to this loft, is the young bird loft which measures 2 feet 8 inches wide, 6 feet 6 inches long and in each of the flying lofts are located a number of inverted "V" shaped perches also.

It will also be noticed that all around this loft is a netting of woven wire, two feet high; this is for the purpose of protecting the young or other birds from their common enemy, the cat, as it will prevent "Pussy" from snatching a bird while it is sunning itself and entirely unaware of the cat's unsuspected visit.

This loft certainly seems to be splendidly adapted for the purpose and is the best that has ever come before our observation.

Cloud Performer's Home.

The accompanying illustration shows the exterior of Nugent Loft of Birmingham Rollers at Station Island, N. Y.

It will be noticed that the loft is the upper story of a building which, we understand, is used for garden tools and other purposes; and this arrangement is ideal for such purposes. For flying birds, the higher up you can get them off the ground, the better they seem to act. Some time ago we had an article in this paper, telling of some Homers that were kept on top of a 12-story building in New York, and this loft was making good records. Another Chicago flyer keeps his birds under the roof of his 4-story factory and they seldom, if ever, light on the ground.

Hence, while it is not absolutely necessary, it is a great help when keeping high flying birds, to have the pigeon loft as high as any of the surrounding buildings.

This loft is 8 ft. wide and 36 ft. long and faces the south. On the inside of the south wall are located the perches which are made of the inverted "V" pattern and against the rear wall are placed the nest boxes which are removed as soon as the breeding season is over and nesting perches are placed on this wall also. With plenty of perch room, there is not much fighting.

The two front traps, shown in the picture, are square box arrangements, three feet square and are designed to let the birds come outside of the loft building and get some idea of the surroundings before being liberated. The bob-wires are built in the building and are so fixed that they can be raised by pulling on a rope from the floor below. The door on the outside of the trap can also be raised and lowered by a rope from below and is dropped at night as a safeguard against cats.

Rollers should be encouraged to enter the trap from the roof, as then they come in more freely and rapidly. Portable partitions permit the loft being divided so as to separate the stock during the winter months.

Chapter VI

Carrying and Shipping Crates

EVERY pigeon fancier who makes an exhibit of his birds at any show will have to have special carrying or shipping cases and also the Racing Homer clubs have to have special coops for both training and the regular races.

For some reason or other no firms in this country seem to have got a start into making the wicker baskets which have been used for such purposes in England for many years. Just why this should be so is difficult to say. Of course these baskets are fragile and do wear out, but they are lighter than a basket made of any other material and with ordinary care they will last for years. But, as we have indicated, no firm in this country seem to have taken to the manufacture of these and we understand that in 1917, when our Army were in need of such, they had some difficulty in inducing a manufacturer of wicker ware, to undertake to make some of these baskets for Army purposes.

This condition of affairs has made it necessary for the United States pigeon fancier to construct boxes of other material and almost every fancier has had a different idea of making such a case. In fact, it is quite a study in human psychology to visit the packing case storage of any pigeon show and look over the different cases in use. It is easy to pick out the cases of the fastidious fancier, the careful fancier and the "get there" fancier. It is hardly necessary to indicate the style of cases used by each, but the mere naming of these traits of character will enable any one curious enough to make such an investigation to understand just what we mean.

But, in all of them, there is an earnest effort to build a case that will serve the purpose and insure the pigeons arriving at the show in proper condition.

As has been intimated, there are two general kinds: (1) Those which may be carried in the hand and (2) those which are to be shipped by express. The former, as the name indicates, are for short distances and never take into consideration the necessity of feed and watering devices as the birds are supposed to be out only a few hours from the time they leave home, until they are put in the pens in the show.

But those that are to be shipped by express, have to provide some method of feeding and watering as since the war the express companies seem to be very careless in handling pigeons and numerous delays have been reported to us. Unfortunately there seems to be no way by which the express company can be brought to time and all shippers have been saddled with the combination of express companies which was effected under the stress of war. While we now know that even before the war, there was some kind of combination between them, yet they had to put on the appearance of competition to "save their face." Hence, it becomes necessary, for instance, when shipping from Chicago to Boston, to prepare the birds for a four days' journey, which should easily be covered by express train in at least thirty-six hours. In fact, we have heard of where it took two days to cover even sixty miles of railroad; or from Sarnia, Ont., to Detroit, Mich.

These things are mentioned here to simply show some of the things the pigeon fancier is up against and he must make his plans accordingly.

Hand Carrying Cases.

Of the hand carrying cases, that shown in Plate XXX, illustrates one that is commonly seen in and around Chicago. It is a simple case with ten small compartments each of which measures six by eight inches by nine and one-fourth inches. The whole case is 32¼ inches long, 17⅛ inches high and 10½ inches wide.

On one side, as is shown in Fig. A, there is a frame or drop cover covered with fine wire, similar to screen-door wire and this whole side or drop down is made to drop down for cleaning purposes. The importance of cleaning is due to the fact that when these cases sit around the pigeon house from one season to another, they become filled with dust and the

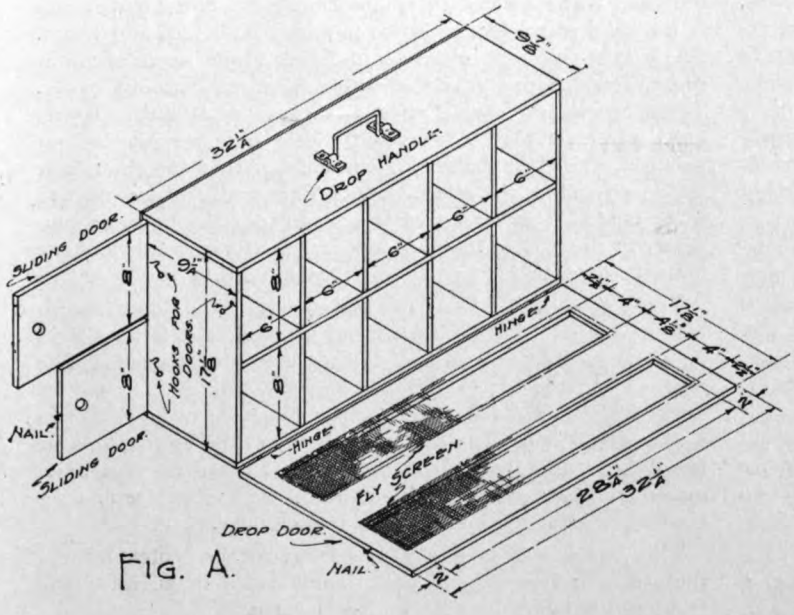


FIG. A.

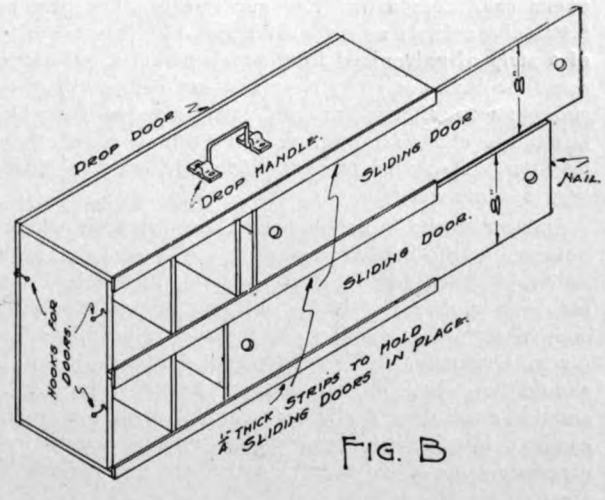


FIG. B

PLATE XXX—A HANDY CARRYING CRATE FOR FANCY PIGEONS.

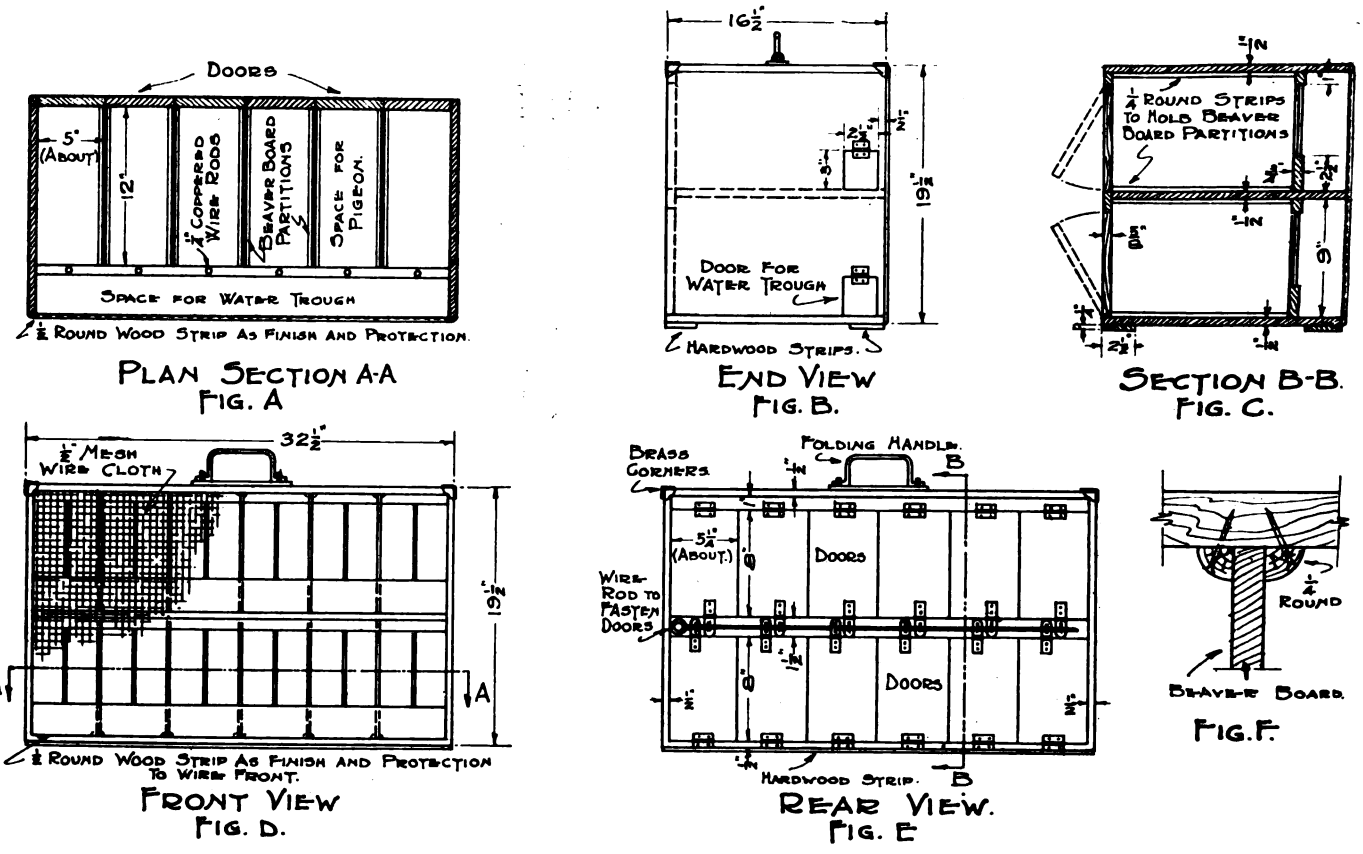


PLATE XXXI—A CRATE DESIGNED FOR BOTH CARRYING OR SHIPPING OF FANCY PIGEONS.

effluvia from the pigeons' feathers, so unless you clean out the case thoroughly before you ship to the show, you are apt to find upon arrival, your nice clean pigeons all covered with dust and dirt.

This case is usually made of some light wood like white wood or poplar or basswood. Half inch material is strong enough if the corners are protected with metal, or reinforced with some form of braces.

The far side in Fig. A, or the front side of Fig. B, is equipped with two sliding doors which, as it slides along, opens each compartment in succession. The drawing illustrates these doors as made of wood, but they are often made of a strip of galvanized iron, which makes a substantial slide, one that does not swell should it get damp with the rain or snow and one that is light and easily fitted as your tinner will be able to cut it straight. When made of wood, they should be fitted loosely to prevent them sticking too close should they become wet.

On top of the box is a handle for carrying which can be obtained at the hardware store and it is best to buy one that will fold down when the coop is not in use or otherwise it may get knocked off in the storage room at the show. The coop described is about right for such pigeons as Tumblers, Owls, Orientals, Frills, etc. For Pouters or tall birds, it should be a little higher and for Fantails, Jacobins, etc., it should be a little wider in each compartment. A fancier could easily determine the proper size for his variety by simply measuring one of his average specimens and making the coop accordingly.

The Buckingham Case.

In Plate XXXI is illustrated that Buckingham case which was designed for Turbits or Pigmy Pouters and in a general way, it is similar to that illustrated in Plate XXX, but it provides facilities for feeding and watering; hence, it may be called a combination shipping and carrying case.

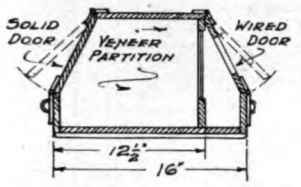
The drawing will give the general dimensions and it will only be necessary for us to call attention to some of the advantage points of this arrangement.

Fig. A gives the general plan and shows the arrangement of the compartments. Fig. B gives an end view and it will be noticed that there are two small doors hanging from an hinge above, and the purpose of these are to furnish an opening into which is inserted a galvanized drawer containing feed and water located in compartments so that each pigeon in its small room, has a chance to get at both feed and water. The water cups are square and have turned over edges at the top which prevents the water from spilling out easily. There is only one dowel-stick in the center of the compartment which the pigeon faces and which compartment is about five inches wide. Hence, on one side of this dowel-stick, it finds feed and on the other, water. The partitions are planned to be made of beaver board which is about the thinnest substance in the way of building material that is available and the method of putting it in place is illustrated in Fig. F.

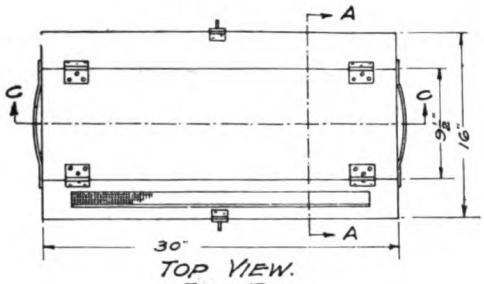
The whole of the front is covered with either door screen wire or half-inch hardware netting, probably the latter would be best, as it would insure a little better ventilation. The pigeons are put into this box from the rear and, it will be noticed, there is a door for each pen hung by an hinge at top for the top row of pens and by an hinge at the bottom for the lower row; and that all of the doors are locked shut by a master rod that passes through the eye of the staples and secures the various hasp fastening of each door.

This box is well made and has brass corner protectors and there is a facing strip of half round moulding covering the front and holding the wire screen in place.

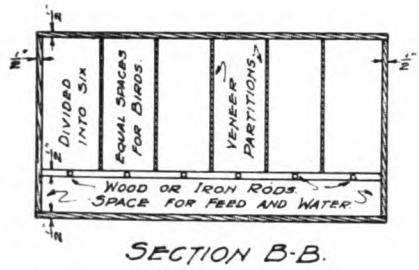
It is not always necessary to make such a case double, or two stories high, but such a case holding twelve pigeons can



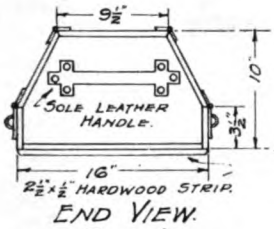
SECTION A-A.
FIG. D.



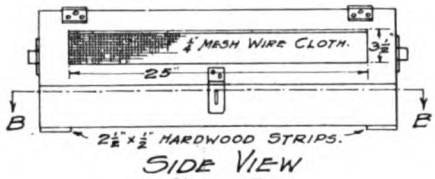
TOP VIEW.
FIG. B.



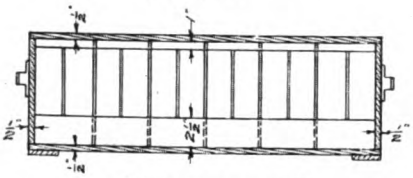
SECTION B-B.
FIG. E.



END VIEW.
FIG. A.

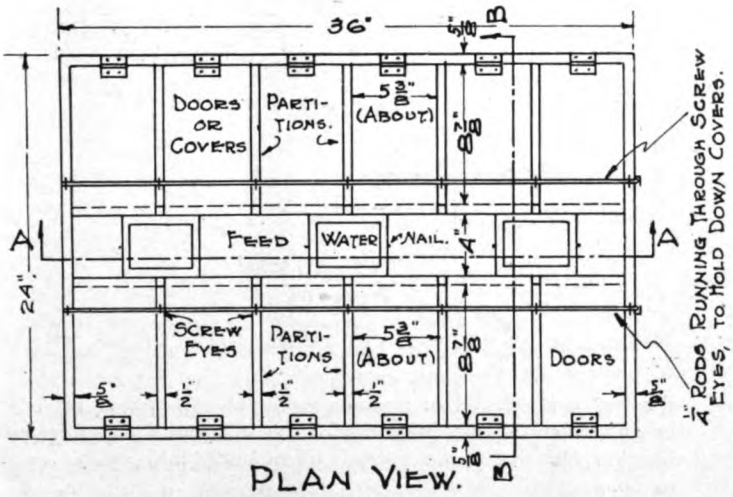


SIDE VIEW
FIG. C.

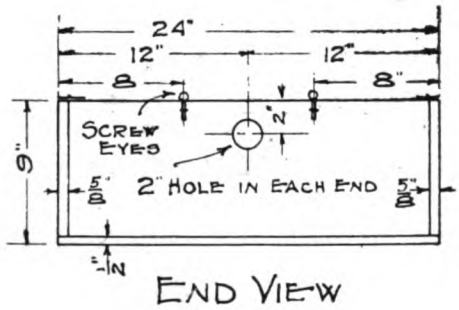


SECTION C-C.
FIG. F.

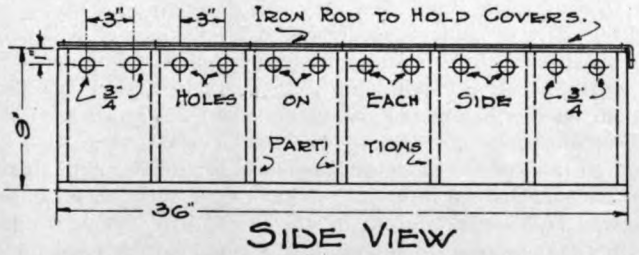
PLATE XXXII—DR. WEAVER S SHIPPING CRATE, SIMILAR TO PRECEDING, BUT MORE STYLISH.



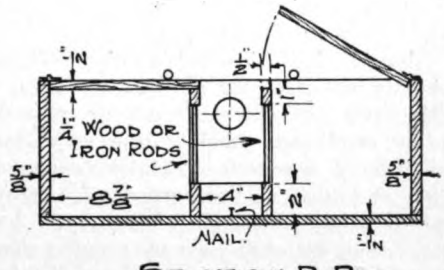
PLAN VIEW.
FIG. A.



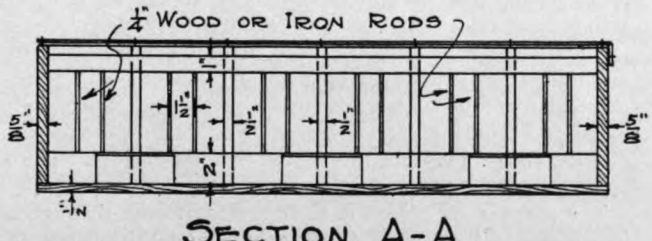
END VIEW
FIG. D.



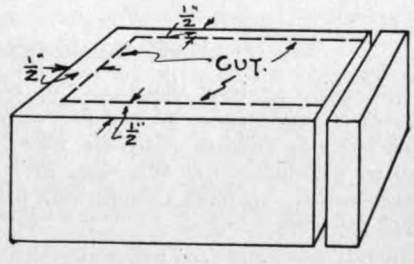
SIDE VIEW
FIG. B.



SECTION B-B
FIG. E.

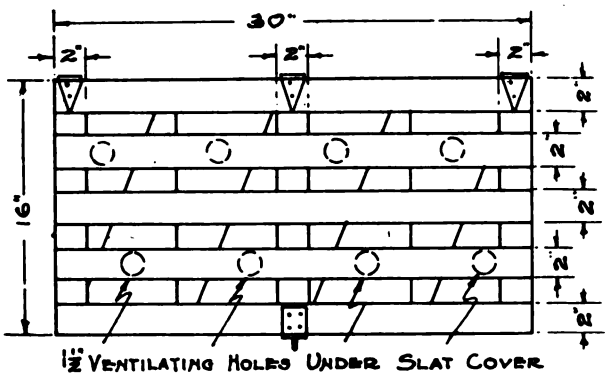


SECTION A-A
FIG. C.

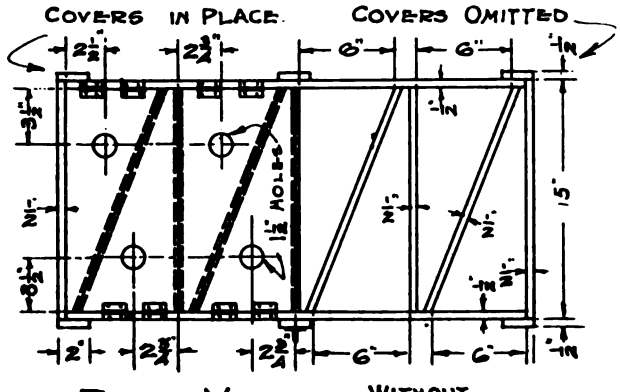


WATER DISH
FIG. F.

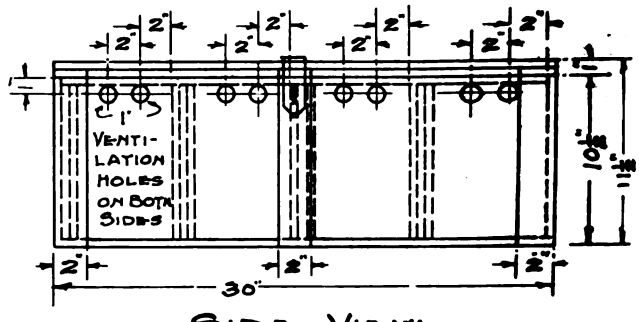
PLATE XXXIII—SHOW SHIPPING CRATE FOR LONG DISTANCES.
Note the plan for feed and water, also the details, which will enable any man to make such a crate easily.



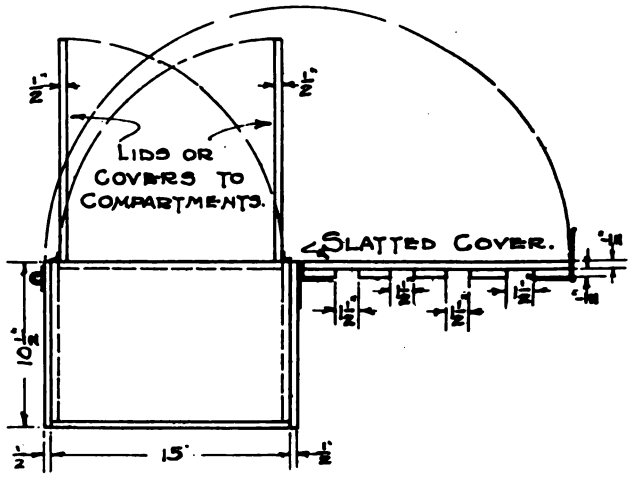
PLAN VIEW SHOWING SLATTED COVER
FIG. A.



PLAN VIEW WITHOUT SLATTED COVER.
FIG B.



SIDE VIEW
FIG C.



END VIEW
FIG. D.

PLATE XXXIV—MR. SCHULTZ'S POUTER CRATE. SUITABLE WHEN BIRDS CAN REACH THEIR DESTINATION IN 20 HOURS.

easily be carried short distances without fatigue, hence this size and style was adopted.

Plate XXXII illustrates another style of a similar case with sloping sides, and the purpose of such is to facilitate the handling and also to serve as a sure protection against the birds being smothered should this case be covered up with other cases in the express car. Having explained Plate XXXI quite fully, it will not be necessary to give many details of this plate which would mean much repetition. As the style indicates, this case is designed more for shipping than for carrying around locally and is therefore built out of lumber which is a little heavier. There is a handle placed on each end, however, so when occasion demands, a couple of men could carry it for quite a distance. There are no feed or water tins shown, but they could easily be fitted in the space in front of the case as shown in Section BB, Fig. E.

A Long Distance Crate.

For shipping long distances the crate illustrated in the figures on Plate XXXIII can be safely recommended. This plan was submitted to us by Mr. Ferrell of Vancouver, B. C., and we presume it was suggested by coops which he had received containing birds coming long distances. It apparently filled the bill.

In this crate the feed and water tins are placed in the center and it is easy to see that this economizes considerable work in constructing such devices and three water tins supplies twelve pigeons and four feed boxes serve a like purpose. All this is shown in Fig. A of the plan. It is suggested, however, that these water and feed tins be made removable and an easy way to do this is shown in Fig. F of the plate where is illustrated a method of making such out of a cocoa tin box by simply cutting a square out of the side and then soldering the top on, which the average mechanic could easily learn to do.

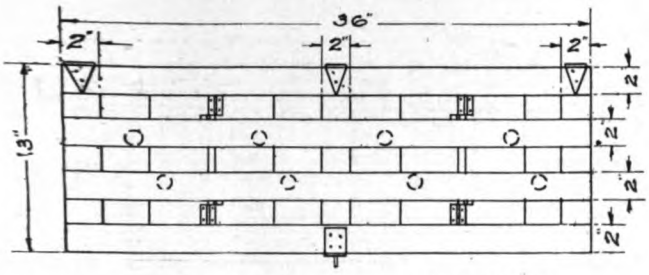
But, should you be unable to do this, the same results could be obtained by using empty canned fruit tins. These, of course, are round, but they will sit safely in a square opening if it is made accurately and a can opener will make it possible to cut this off at the proper height. The upper edges make a better looking job if they are bent over and pressed down, or hammered in place with a light blow of the hammer.

If this coop is to be used regularly for sending bird to shows, it would make a nicer job, to have your tinsmith make proper feed and water tins out of galvanized iron which would last for many years. The empty tins could not be used for more than one or two trips as they would soon rust and be worthless. While the galvanized iron tins would be much more satisfactory on account of their greater durability.

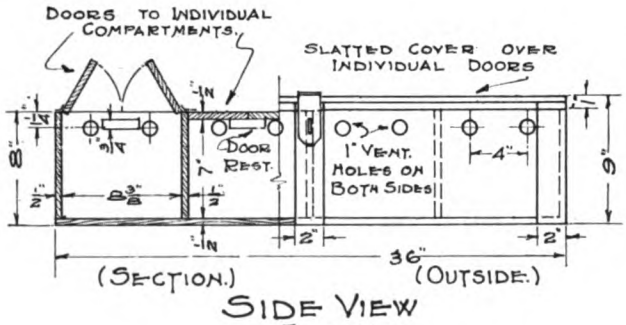
Should the round tins be used, it will be necessary to nail in some strips to hold them in proper place; but it is recommended that these spaces be made so the tins will simply set in place. By this arrangement they can be removed and cleaned should they become fouled from any cause. The same applies to the feed tins.

The pigeons are placed in their compartments through openings covered by hinged doors on top and this leaves an unobstructed opening to the feed and water as is shown in Fig. E, which is a section of E-E in Fig. A.

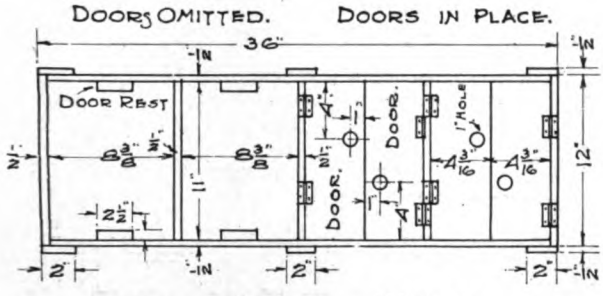
In building this crate, or case, for any breed of pigeons, it is recommended that you make a trial measurement of the



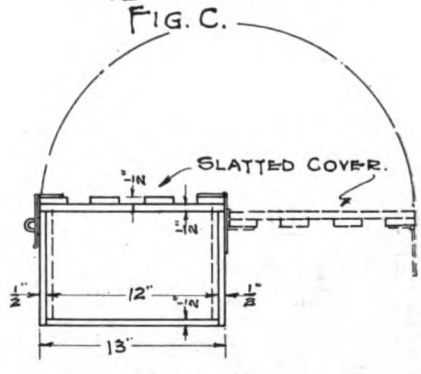
PLAN VIEW SHOWING SLATTED COVER.
FIG. A.



SIDE VIEW
FIG. C.



PLAN VIEW WITHOUT SLATTED COVER.
FIG. B.



END VIEW.
FIG. D.

PLATE XXXV—MR. DREIER'S MUFFED TUMBLER SHIPPING CRATE.

pigeon and build it so the bird cannot well turn around. Of course, a pigeon standing upright can turn around in a small space, but if the coop is low down so it cannot raise in such an upright position, it will surely always stand in the right direction. Hence it will be noticed that some of the measurements are given as above and it is expected that the fancier will use some of his best judgment in building such coops properly. Of course, for a very long journey, it would be well to give the pigeon ample room to turn around at will as by so doing it would get a little exercise and arrive at the destination in proper shape.

Notice also the small holes suggested for ventilation, these are indicated as being of three-quarter inch, but full inch holes would not be too large. This coop is fastened shut with two iron rods which pass over the tops of the doors through small staples and by making a loop at one end of this rod and a small hole in the other through which a small pad lock could be fixed, this coop could be locked against intruders.

Short Distance Shipping Coops.

In Plates XXXIV and XXXV are illustrated two styles of short distance shipping coops. The former was designed and used by a Pouter breeder and the latter by a breeder of Muffed Tumblers. The first one shows how to economize space when the bird is long and narrow and the latter one shows what you have to arrange for when the pigeon is more rounding with long muffs as the Tumblers are, or as the Fantails and Swallows are. There is nothing peculiar or difficult about the construction of these coops, only we would call attention to the fact that there are separate inside coverings for each small compartment and these are all protected and held in place by the "crate" covering of the outside top as the drawings indicate.

Racing Pigeon Shipping Crates.

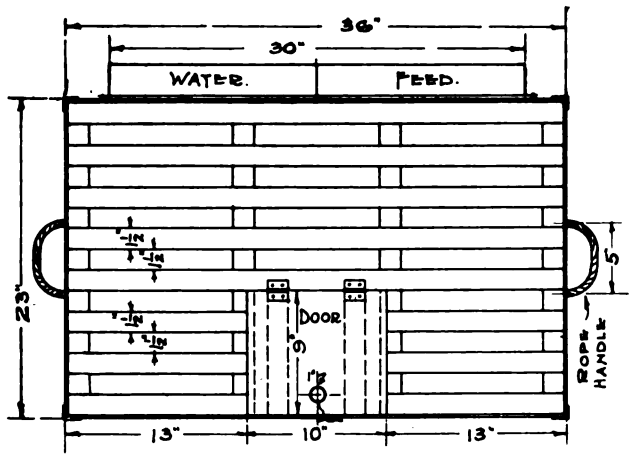
In England the Racing Pigeon Shipping Crates are usually made of wicker ware, but this does not seem to stand the racket in this country, hence our pigeon men have sought something more substantial and have turned to wood. Accompanying are two plates, Nos. XXXVI and XXXVII, which show kinds used for such purposes. The first in British Columbia and the second in Chicago.

Plate XXXVI gives practically all the necessary details even to the detail of showing how to fasten the corner protecting pieces of sheet iron with ordinary belt rivets and a careful study of the details will reveal how such is made.

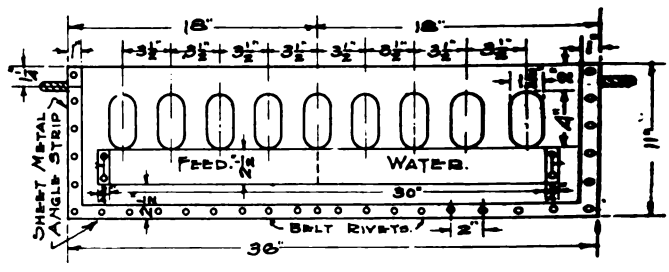
Plate XXXVII only gives the dimensions, hence we will give a few further particulars. The general framing is one and three-eighths inch wide strips, seven-eighths inch thick. The six strips, running lengthwise over the top are ½x3 inches, and there are seven of same kind on the bottom. Those on the bottom are placed flush with the outer edge while those on top are set back one inch from the sides. This permits a circulation of air when two or three coops are placed on top of each other. For the same reason there is one of the same strips placed upright at each end.

The top is framed from 3x⅞-inch material with the corners joined by faced-tenons. The illustration shows three extra cross-pieces of the same size material which are tenoned and housed in the pieces running lengthwise. After framing, the top is covered on the underside with half-inch hardware netting and the edges of same are protected with battens.

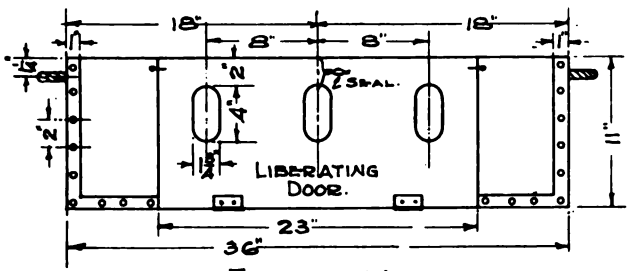
The bottom is framed in the same way, but instead of wire covering, a beaver board was used. The ends and sides are framed in the same way and covered on the inside with one-half-inch netting. The lines showing in the drawing will



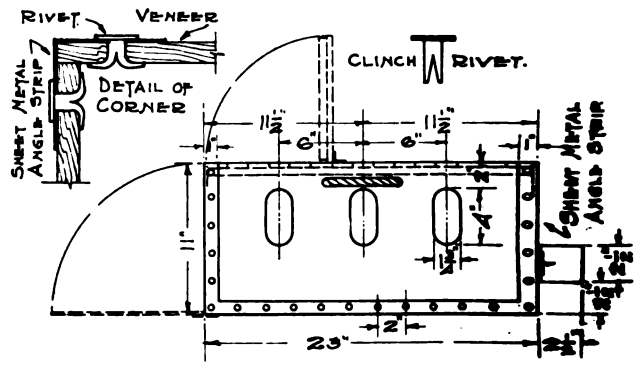
PLAN VIEW.
FIG. A.



REAR VIEW.
FIG. C.



FRONT VIEW.
FIG. B.



END VIEW
FIG. D.

PLATE XXXVI—A BRITISH COLUMBIA RACING HOMER SHIPPING CRATE.

give a good idea of the framing of the front. The front door is hinged with three 3-inch iron butts and is secured shut with two iron bolts, which are simply one-quarter-inch iron rods set into a square piece of iron screwed to the edge of the framing of the door. These bolts, when the door is shut, can be shot into holes in the top frame and when they reach home, a small hole appears just above the iron guide and through this hole is passed the wire of the seal, which effectively seals this door.

In the back frame is a small square hole 2¼x2 inches high, through which a long galvanized iron pan, 28 inches long, can be pushed, and this affords a means of giving the birds a drink. This pan slides on the center cross-strip of the bottom and is kept in place by two small strips. From the corresponding strip of the upper frame hangs a board planed to a feather edge on the bottom and which extends down close to the top level of the water pan. This divides this coop into two compartments and prevents the brids from fighting when they take a drink.

This coop is fastened together at the corners with 3-inch wood screws and over them is fastened heavy galvanized sheet iron which gives a good finish and makes it very durable.

The wood most desirable for such a coop is ash, or birch, or maple, whichever may be the easiest obtained.

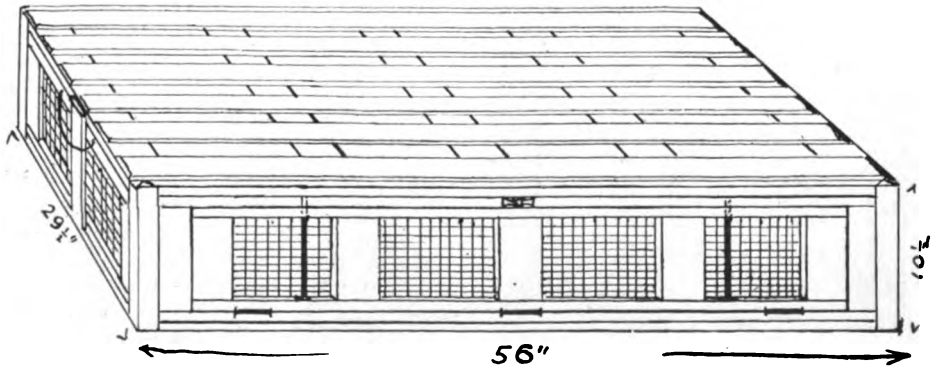


PLATE XXXVII—A CHICAGO RACING HOMER SHIPPING CRATE.

Chapter VII

Fixtures and Appliances

Interior Fittings.

WHILE we have mentioned something about interior fittings in the chapter on Nesting Arrangements, there are still some additional fittings and accessories which are needed in every loft; and in introducing these to our readers, we will try to impart some information as to their advantages.

As has been pointed out, all such fittnigs should be as simple as possible and if it is possible to make them portable as well, or at least so constructed as to be easily cleaned and kept free from droppings and vermin. In many of the fanciers' lofts, egg or orange crates are often used for nests. These are satisfactory, if they are kept whitewashed after each nest of young is hatched; otherwise at the end of the season, they will house a million vermin which is a great handicap in pigeon keeping.

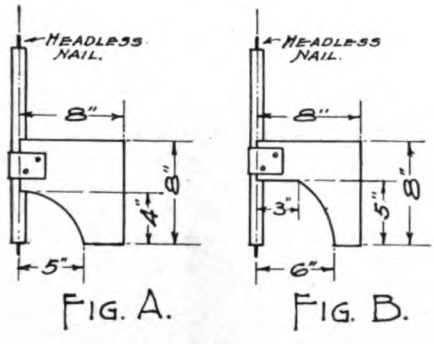


FIG. A. FIG. B.

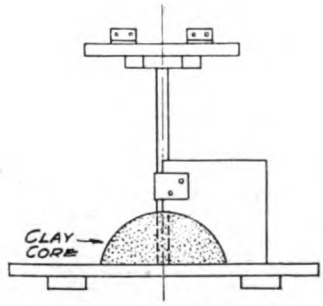


FIG. C.

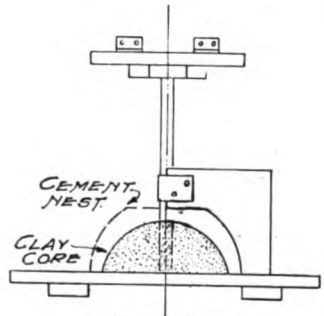


FIG. D

Next to the nest, is the question of a nest pan. For squab purposes the square boxes seem to satisfy and prove sufficient. But the fancy pigeon men who are observant has found that the earthenware nest bowl has some advantages. One of these is, the facility in slowing up a pair of breeders by the simple expedient of removing the nest bowl from the nest; or by simply turning it upside down. In August, if you remove these bowls, the birds will almost stop breeding of their own accord, and this is therefore a useful device. Furthermore, the earthenware bowl, or that made of the same material as the common flower pots, does not furnish as good a harboring place for pigeon lice as a wooden box which is almost sure to have some small cracks in it into which the louse can go and lay their eggs and from which in a few days will come forth another brood of vermin. The earthenware nest bowl being of a porous material is colder to the feet of such lice and it has been found by experiment that a chicken louse will not travel along an iron rod, hence it can be assumed that an earthenware bowl will serve the purpose of halting the migrations of such insects and thereby prevent them from getting into the nest and on the newly-hatched pigeons, to which they are almost sure death.

Wooden nest boxes or bowls would be better if they were whitewashed after each hatch, or dipped in a disinfecting solution and allowed to dry.

Nest bowls are made in different sizes: nine and eleven inches are supposed to be the standard. Such sizes are suitable for most breeds of pigeons, but the English Pouter, Runts and such large varieties, would be better off to have a bowl or box slightly larger.

For those who are unable to procure the ordinary nest bowl, we submit a sketch which illustrates how they may be made out of Portland cement, as is shown in Plate XXXVI. Fig. E shows the contrivance complete. Figs. A and B give the details of the two former and Figs. C and D illustrate the method of making. To make this bowl successfully, you need a small quantity of clay and a supply of good cement and coarse, or torpedo, sand. You first moisten the clay and make it to the shape shown in Fig. C. As soon as it hardens a little you can then build up over it a layer of cement mixture made from about one part cement to six parts torpedo sand thoroughly mixed and moistened so as to make a thick paste. Then work the larger form shown in Fig. B in the manner as illustrated in Fig. D and you will have made a nest bowl. By having several bottom boards as shown in Fig. E, and a supply of clay, several nest bowls can be made at one time. Cement bowls may be a little damp, but not too much so in a dry climate and this can be overcome by putting some sawdust in the bottom of the bowl for the pigeons to lay their eggs in.

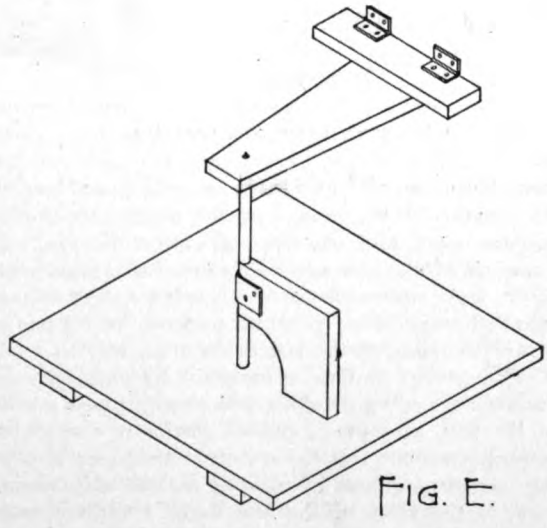


FIG. E.

PLAN FOR MAKING NEST BOWLS FROM CEMENT.

Water Pans.

The drinking water for pigeon is a point that requires most careful consideration. What is desired is a contrivance that will supply fresh and clean water at all hours of the day. In winter we are troubled with the water freezing and in summer with it getting too hot and becoming insipid. What is de-

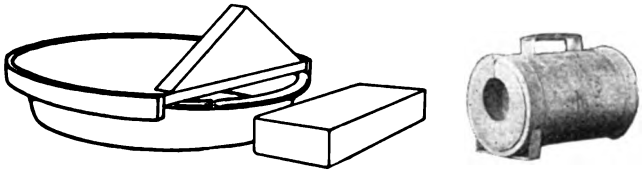
THREE ENGLISH STYLE WATER AND FEED FOUNTAINS.

sired is a fountain that will furnish a liberal supply and yet one that is so constructed as to be easily cleaned from time to time. The importance of good drinking water is a question over which the Racing Homer man spends considerable thought and in the best arranged lofts there is generally some provision for a supply of running water. This is possible in cities and town where there is a water works and it is now generally known that running water purifies itself, hence running water is said to be fresh and pure. The usual method is to let the water slowly drip into a small receptacle from which the pigeons can help themselves at will.

Pigeons also like to bathe and if the opening to their drinking fountain is large enough they are inclined to try and take their bath in it and thus soil the water for drinking purposes.

With these facts before us, it is easily seen what has to be planned to supply fresh drinking water.

One of the simplest of such arrangements is an ordinary crock with a home-made cover as shown in the accompanying sketch. An old cast-iron frying pan will do, or an agate



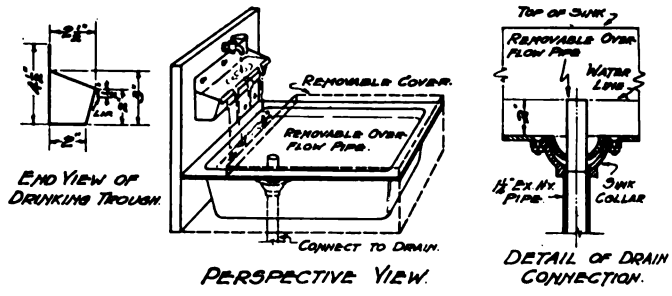
TWO DRINKING FOUNTAINS.

ware pan. Turn the pan upside down on a board and mark the board round the outer edge of the pan. Saw the board round on the mark and you have a lid for the pan. Next, cut off enough of one side to allow room for a pigeon to put its beak into the water, and on this edge nail a triangular piece of wood as shown. Next, take an old barrel hoop and nail it round the edge of the board like the cover to a box of cheese. Your device is now complete. As pigeons seem to like to stoop over when drinking, we usually place a brick in front of the pan, as shown. Such a device is easily cleaned and the pigeon cannot soil the water. The cover also keeps the water cool in summer by shading it, and also keeps out dust, etc. If the sides of the pan flares a little it will not break when it freezes in winter.

Combination Drinking and Bathing Fixture.

One of the handiest arrangements which we have seen in our travels among pigeon men, was made from an old kitchen cast-iron sink. This was in a loft of African Owls kept by a man who was a plumber by trade.

A sketch of this device is shown herewith and consists of a pan about 24 inches long and 18 inches wide and four inches deep. This was the ordinary iron flat rim sink and by procuring an ordinary 1¼-inch sink collar, you can replace the regular strainer outlet connection, with this collar with small bolts. Into this collar screw a piece of 1¼-inch extra heavy pipe about a foot long. Have the end of this paper tapped for



A CONTINUOUS WATER SUPPLY FOR PIGEONS

one-inch iron pipe and into this tapped end screw the one-inch overflow paper which is about three and a half inches long and projects up into the sink as shown in the detail at the right, so as to make the level of the water about two inches. This small pipe should be simply screwed in by hand and by so doing, it can be removed in the same way and the sink flushed out when it needs cleaning. Of course, the bottom end of the 1¼-inch pipe should be connected with your drain or lead to the bottom of a hole, which is filled with gravel and then covered over.

Next, have your tinner make a galvanized pan as is shown in the detail at the left of the illustration which also gives the dimensions. This can be hung at a suitable height so the pigeons can drink at leisure, when standing upon the board cover, which it is recommended that you have made to fit and place over the sink, when you do not wish your birds to bathe. The front edge of this drinking tin should be flanged over to assure the water overflowing into the sink and not spattering all around.

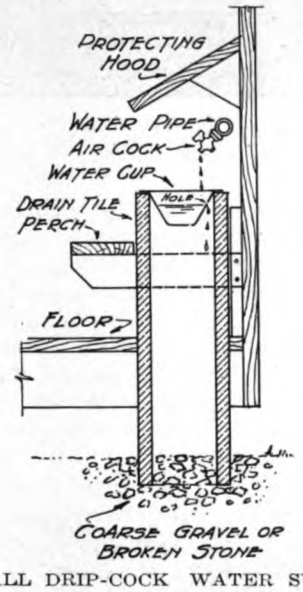
Should you decide that the pigeons may bathe at will, you could dispense with this drinking pan and simply place a brick in the sink for the pigeons to light on to take their drink. This would permit them also to bathe at pleasure. In summer, it is our opinion that they will not overdo the bathing process and if the birds are accustomed to it, there will not be much danger at any season of the year. In fact, if they do not bathe, the chances are that there is something wrong and you should give the bird a careful inspection for body lice. When this plan is adopted, the sink will fill up until the water overflows the small pipe which is screwed into the long length of 1¼-inch pipe, as mentioned. Should the sink become fouled, simply unscrew this small pipe and have a small wisk broom handy, with which you can sweep all the droppings through the pipe and the volume of water passing through the 1¼-inch pipe will cleanse it.

The water is admitted to this sink from a Smapp steam pet cock and a small drip is all that will be necessary. This will keep the water fresh and the man at whose place we first saw such a plan, told us that he had gone away and left his pigeons for several days at a time with feed in the hoppers, and felt sure they would get along all right.

Small Flowing Fountain.

A small flowing drinking fountain is illustrated in the sketch herewith. This is a simple arrangement and consists of cutting a hole in the floor into which is set a three or four-inch drain tile which projects down until it reaches the ground which should preferably be of gravel. On the upper end of this sits a small pan of a suitable size into the side of which some small holes are bored to provide an overflow. Above this, running along the wall of the loft, is the water main which need be only of one-inch pipe with pet cock taps in each loft. Over all is a projecting board to prevent the pigeons from getting into the pan and soiling it. The dimensions of this board and the bracket upon which the pigeons

stands to take their drink are not shown, but they will vary with the different breeds of pigeons and any ingenious pigeon fancier can easily determine how to locate them properly, if he will but remember that a pigeon, like a horse, like to have its head down when it takes a drink. A man really does likewise, as is often experienced when he takes a drink at a



A SMALL DRIP-COCK WATER SUPPLY.

spring, which is the most refreshing drink we ever have—clear, cool, bubbling water. Of course, if there was a long house and a series of such drinking places, it would be advisable to have the tiles connected with a drain.

There are some watering devices advertised for poultry, but our opinion is that those that are controlled with a float would require such an amount of water to be removed before the float would act, that, because the pigeon is not a great drinker, the water would become stale and stagnant before the float would act and let in a new supply. And, while pigeons really do not consume much water internally, they are great lovers, like small boys, of splashing in water, and will take a bath every day if given a chance, hence they soil and contaminate considerable water and some provision should be made for this in the watering arrangements.

Portable Drinking Fountains.

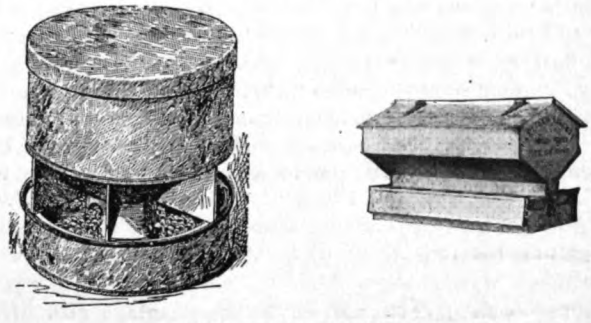
Of the portable drinking fountains, probably the best is the one illustrated herewith which consists of a pan, generally made of galvanized iron with sides about two inches high, surrounded with a frame of the same metal carrying small rods placed upright about 1½ inches apart; and over all is a cone-shaped hood of galvanized iron which protects the water from the pigeons' contaminations. Some times the top is soldered in to the side wires and by removing the same, the pigeons can use the pan for bathing. This is a very good drinking device and as it will carry quite a quantity of water, the same will remain cool for quite a while, provided it is located where the direct rays of the sun will not strike it. There is one fault with this device, however, it will freeze in winter and unless the sides are slightly flaring, it will take a good deal of work to remove the ice. Of course, this can be overcome by removing the pan to the house each evening, which would give you a pan free from ice each morning.

When this bottom pan is used as a bath, if you do not want your floor all soaked with the splashings from the bath, you can prevent it by the simple expedient of placing the bath pan in a larger pan or tub; then all the splashings will be caught in the tub. This is especially desirable in winter or rainy weather when there is usually enough dampness in the pigeon loft.

Another of the portable drinking fountains is what is known as the fountain design. They are made of both galvanized iron and also of pottery. In summer the latter have advantages as the water will keep cooler. Both of these are rather difficult to cleanse, but if you have any gravel handy, you can use a small handful and this will quickly remove all the green scum which is always forming on such vessels in summer time.

Those made of metal are generally made so as to come apart to facilitate the cleaning and such of those as have a small opening are very good for pigeon watering purposes.

There are on the market two or three kinds of "Termos" bottle drinking fountains. These are the ordinary fountain which has been used for years and which was constructed so as to be laid down on its side; and another double-walled device, which is packed with mineral wool or other non-heat-conducting material, made so the ordinary fountain, as mentioned, can be shoved into this outer covering, which is claimed to prevent the water from getting too warm or freezing. We have had some experience with such a device and believe there are places where it will serve the purpose for which it is intended; and we will say that we have found that it will keep the water in good shape for at least seven days, provided the birds do not drink it up in the meantime.



TWO FEED HOPPERS.

Feed Hoppers.

Pigeon feed hoppers present a complex and perplexing question. Candidly, we believe the hopper has not been invented yet that will suit this purpose as we have tried four different kinds and find that they all spill and, thereby of course, waste feed. Those who have watched pigeons feeding will have noticed that they like to thrash the grain to one side and another, looking for some special grain for which they may have a liking, and of course, the feed that is thus thrown out and stepped upon is soiled and wasted; if not serving the main purpose of causing digestive troubles in your flock. Further, this selection of certain grains tends to give the birds a surplus of what they should not have—in other words, it unbalances the balanced ration.

There is only one time when we feel free to recommend hopper feeding, and that is during the breeding season. It is our opinion that when a pigeon is feeding young it cannot get too much to eat, and if it has preference for one grain over another, it will favor the grains which are, so-called, "fat-forming" and for squab purposes this is an advantage in producing fat squabs. In other varieties, it seems to us there can be no particular harm in the young squab being a little fat when leaving the nest; as this extra fat should carry it along well until it has learned to pick up grains by itself. There is only one or two varieties of pigeon to which this might be an objection and these are the Pouters and perhaps the new modern Magpies. Both of these varieties are preferred with small, slender waists, rather than the thick, fat kind.

Right here, permit us to say that it is a mistake to try to make a hopper that will carry feed, grit, salt, etc., as when one

of these articles gives out, it usually happens that this is a time for a little cleaning and if the other compartments have grain or other things in them, you cannot do as you know you should. Better have separate container for grit, charcoal, oyster shell, salt, or such things and in reference to these, our recommendation is not to make them too large. Rather make them so small that they will have to be replenished every few days, at which time you can clean them out. This point is occasioned because in a pigeon loft there is always a fine powder flying around, which is the "effluvia" from the feathers. If you catch a pigeon in summer and brush the feathers with the hand, you will find this will come off on the hand, and as the pigeon flys it is passing off all the time; hence, this feather effluvia is likely to get into the drinking water, grit pan, etc., and while it is dry, there is not likely to be much trouble, but when damp weather comes in the fall, surfaces to which it adheres, will get mouldy and this makes trouble.

In reference to feeding troughs, we are of the opinion that while to many fanciers all such are tabooed, that a trough made about four inches wide and of an appropriate length to accommodate as many birds as you have in one pen so they all can feed at one time; and said trough protected on the side with dowel sticks or small upright wires, about one and one-half inches apart so the birds cannot enter and trample on the food and the whole covered with either a solid, flat board or iron covering, is one of the best devices for this purpose. Of course, it could be made so as to hang against the wall and it could be made circular so as to contain a large quantity of food and thus serve as a hopper. But, our opinion is that it would be better to have it of a size so only one or two days' supply of feed could be placed in it at a time and this would necessitate the pigeons eating up all of their mixture and getting the full effects of all the grains, before it is replenished.

Hopper feeding devices have the disadvantage also of attracting rats and mice, especially the latter, which eat such a small quantity of grain that it is hardly noticed, but in the course of a year it will be quite an additional expense, besides the trouble such rodents will cause in your pigeon breeding operations. And, we feel compelled to call attention to the fact that when hoppers are used, you should have a regular day for replenishing them, otherwise you may overlook this and some morning you will find your young pigeons all dead or dying simply because you have failed to give the old birds feed enough.

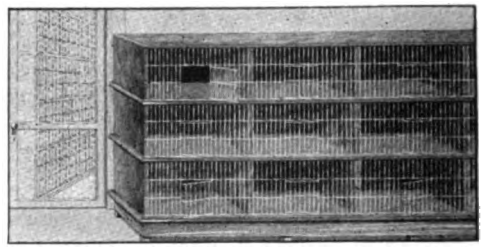
Scrapers.

As the cleaning of the pigeon house will require some scraping to loosen the droppings, a scraper becomes a necessary implement. For such purpose a ice scraper, such as is sold in hardware stores for removing the ice from sidewalks in winter, is a very handy and useful implement. For working around among the nests, we like the painter's scraper, which is like a wide putty knife, with a blade about three inches wide and furnished with a maple handle. This is very handy to loosen up the matter in among the shelves. There is also a scraper made for use in cleaning rabbit hutches which can be used in conjunction with the painter's scraper. By using one in one hand and the other in another; after the matter has become loosened, it can be gathered up somewhat after the manner of sweeping dust onto a dust-pan.

The old style, was to use a three-cornered scraper somewhat like a hoe, but somehow or other, we prefer the former method as described, rather than hoeing the material towards one's self at the risk of soiling your clothes.

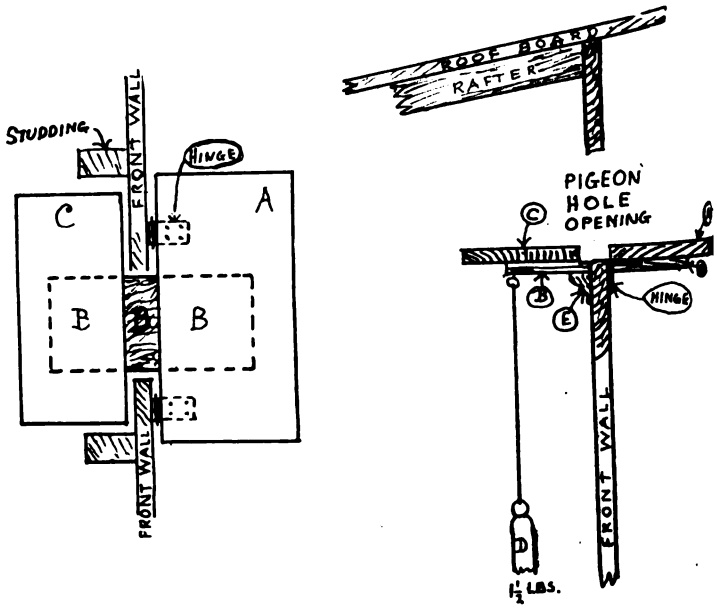
Training Arrangements.

In the description of the Pouter loft mention has been made of training quarters for fancy pigeons. In fact, all who exhibit pigeons should have some cages into which he can place his birds and compare them somewhat after the style and manner as the judge will do at the show.



A TRAINING COOP FOR GETTING FANCY PIGEONS READY FOR SHOW.

For this purpose there is nothing better than the regular exhibition cage which can be bought in sections. In Chicago the usual custom is to set up some of these in the basement or some place where the birds can be kept in an even temperature and where it will so warm that water will not freeze.



A "DROP BOARD" FOR PROTECTING THE LOFT FROM CATS.

A Cat "Drop Board."

Perhaps my experience with cats will help some beginner who is having the same trouble. The best and quickest remedy is to invest a few dollars in a 22 cal. rifle and a few B. B. caps, if you live in a neighborhood where you are not likely to hit the parrot on the neighbor's piazza. But as my lofts are in a thickly settled locality this would be dangerous and as the cats continued to make their daily visits to my lofts and help themselves to the first bird they came to, regardless of quality or value, I decided to try and scare them away.

First, I wired up the flying pen and the outside lighting board with bare copper pail to the lighting board, which the cats had to pass over to get into the lofts. All this was connected to an electric light socket and switch in the house where I could look out onto the flying pen. As soon as pussy had a good foothold on the lighting board I would turn on the switch, which usually resulted in a double "flip-

flop" and a hundred-yard dash across the lot. This remedy worked fine Saturdays and Sundays, but as I could not leave the current on all the time I had to fix up something that would work seven days a week.

So I put up what is known around here as a drop-board; you can see by the sketch enclosed just how this board works. The outside board (A) works on two pair of hinges screwed to the bottom of the board and the outside of the building; the inside board is marked (C). The small strip (B-B) passes through the pigeon hold and is nailed to the bottom of (A) and (C). The weight (D) is fastened to the inside board and is just heavy enough to hold the two boards at right angles with the weight of one pigeon or about 1½ lbs., on the outside board. The small bracket (E) is nailed to the inside wall to keep the small board from dropping down.

With the correct weight on the inside anything over 1½ lbs. dropped on the outside board will cause it to drop down flat against the building. Even if a cat hangs onto the board the small strip closes the pigeon hole up tight. I have seen the same cat climb up to the top of the loft three times and drop onto one of these boards, but pussy always finds herself back on the ground.

When making one of these boards don't forget that the small strip must pass through the pigeon hole before it can be nailed to the inside board. One of these boards will save a good many young ones that would otherwise furnish the material for a feline banquet.

How I Make a Good Bath Pan Cheaply.

By William A. Simpson.

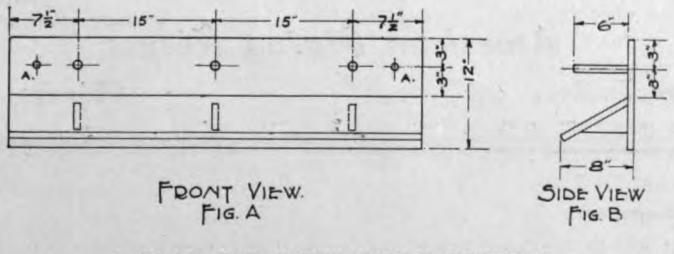
I commenced the pigeon business in a little slant roof or shed style of pigeon cote. I built this house for the purpose, but, like several beginners I have since come in contact with, I made no provision for a youngster or rearing pen, figuring all the floor space into two units and a passageway. At first I used one of the pens for the youngsters, of course, but, having Homers, it was but a surprisingly short time before both units were filled with breeders, and it became necessary for me to find room for the youngsters and odd birds until a suitable addition could be erected. This I did by extending a balcony or shelf over the front or highest end of one unit, which made a satisfactory pen for the purpose and utilized space which otherwise would have been of little use, as my nestboxes were in the opposite end and on the sides of the unit.

A balcony of this size (8 ft. x 4 ft. x 1 ft. x 1 ft. 6 in.) can be easily made by anyone accustomed to use hammer and saw. The frame of the floor is of two by fours, one end of which should be hinged to the inside wall of your house, using a large strap hinge. You should use the same number of two by fours, and place them exactly below the scantling or rafters of your roof. Nail common flooring across the frame, using boards long enough to extend the entire width if possible, as the floor swings down for cleaning, etc., and should be as rigid as possible. There are no sides needed if built in the common style of loft, as these will be covered by the partitions of the units or the side walls of the house. The front or inside is covered with poultry wire tacked on one by four strips, being in pairs from each side of the rafters. Each of these pairs of strips receives the end of one of the two by fours, forming the frame of the floor when it is raised in its normal position. A handy fastening is a half-inch bolt or a spike slipped through each of the joints thus formed. A sliding door is placed in the front and the pen is reached by a short ladder fastened to the side wall of the house. I have the pen connected to a small fly by means of an ordinary pigeon hole, closed with a sliding door operated by a lever from below. It is not necessary to have the floor hinged, but this will be found a great convenience when cleaning and whitewashing.

An economical and handy bath pan can be quite easily made from a sheet of galvanized iron, say 5 ft. x 3 ft. Turn the sides up six inches, making a seamless joint at the corners by pinching the metal together as you fold the sides and then bending the flaps around and fastening with a rivet at the upper edge of the pan. Some of the old-fashioned bread pans were made in this way. Its chief advantage is that the metal does not need to be cut, thus avoiding all soldering and any necessity of leaking joints. A pan of this size can be permanently placed between two pens and do service for both. By nailing a one-inch strip around the outside edge a neat finish and handy footing is obtained for the birds. A one and one-quarter inch hole makes a good outlet and can be strengthened by bolting to the outside a hardwood block having a hole corresponding to the one in the pan. Place a strip of leather or rubber between the pan and wood and use small metal washers under the head of your bolts to prevent tearing the pan. Very little trouble will be had securing a tight joint. If you intend to carry the waste water to a sewer outside your flypen a nipple can be turned into the lower edge of the block, which should be about two inches thick in this case, and from this connect your pipe. A large cork or wooden stopper can be used as a plug.

In Illinois I find the muslin windows can be used quite satisfactorily, but prefer a double thickness of cloth, especially in winter. I made my sash of one-inch material, tacking a thickness of muslin on each side, which leaves an inch space between. This provides ample ventilation and is very much warmer than the single window. I also use inside doors of the same material in winter. I believe any effort made to promote the comfort of the birds during the severe weather will be amply repaid by better service on their part. I use a heater during extreme weather, but believe there is more danger of supplying too much artificial heat than not enough, as the pigeon, especially the Homer, is not by any means a hothouse plant.

"Squab Magazine."



FRONT VIEW. FIG. A

SIDE VIEW FIG. B

A PLAN FOR "PEG" STYLE PERCHES.

BOOKS FOR PIGEON KEEPERS

As it is impossible in the conduct of a pigeon paper to continually repeat many of the fundamentals in management, we have gathered such information together in book form and the following books will give pigeon keepers valuable, accurate and up-to-date information.

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